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ABSTRACT

This document discusses the Small Business Development Center initiative which addresses the needs of California businesses to grow through the delivery of one-on-one counseling, seminars, workshops, conferences, and other technical activities. The community colleges host 21 full centers. Some of the major objectives of the initiative are the following: (1) create and retain jobs; (2) create investment in companies to stimulate economic investment; and (3) increase business sales, thereby increasing economic impacts on regions served. Some of the strengths of the initiatives are that it actively promotes to the small business community college programs and services, offering diverse services to colleges, and partnering with local organizations including colleges, chambers of commerce, cities, economic development organizations and private business. There are four systematic barriers to the success of the initiative: (1) communication and leadership barriers between the three main stakeholders; (2) different funding formulas have created problems so that funds have not been distributed to rural centers; (3) limited funding; and (4) demands for services exceed center resources and it does not seem that this situation will change in the near future. The document also addresses the emerging opportunities for this initiative, whether the initiative could be sustained without categorical funding, and how additional funds would be used if they were made available. (MZ)

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Annual Report
2000-2001

CALIFORNIA COMMUNITY COLLEGES ECONOMIC DEVELOPMENT PROGRAM

Many Benefits... Benefits Many

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CALIFORNIA
COMMUNITY
COLLEGES
ECONOMIC
DEVELOPMENT
PROGRAM

Many Benefits... Benefits Many

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Primary Authors:

Kay Ferrier
Dean, Economic and Workforce Development Program
(916)324-5646, kferrier@cccco.edu

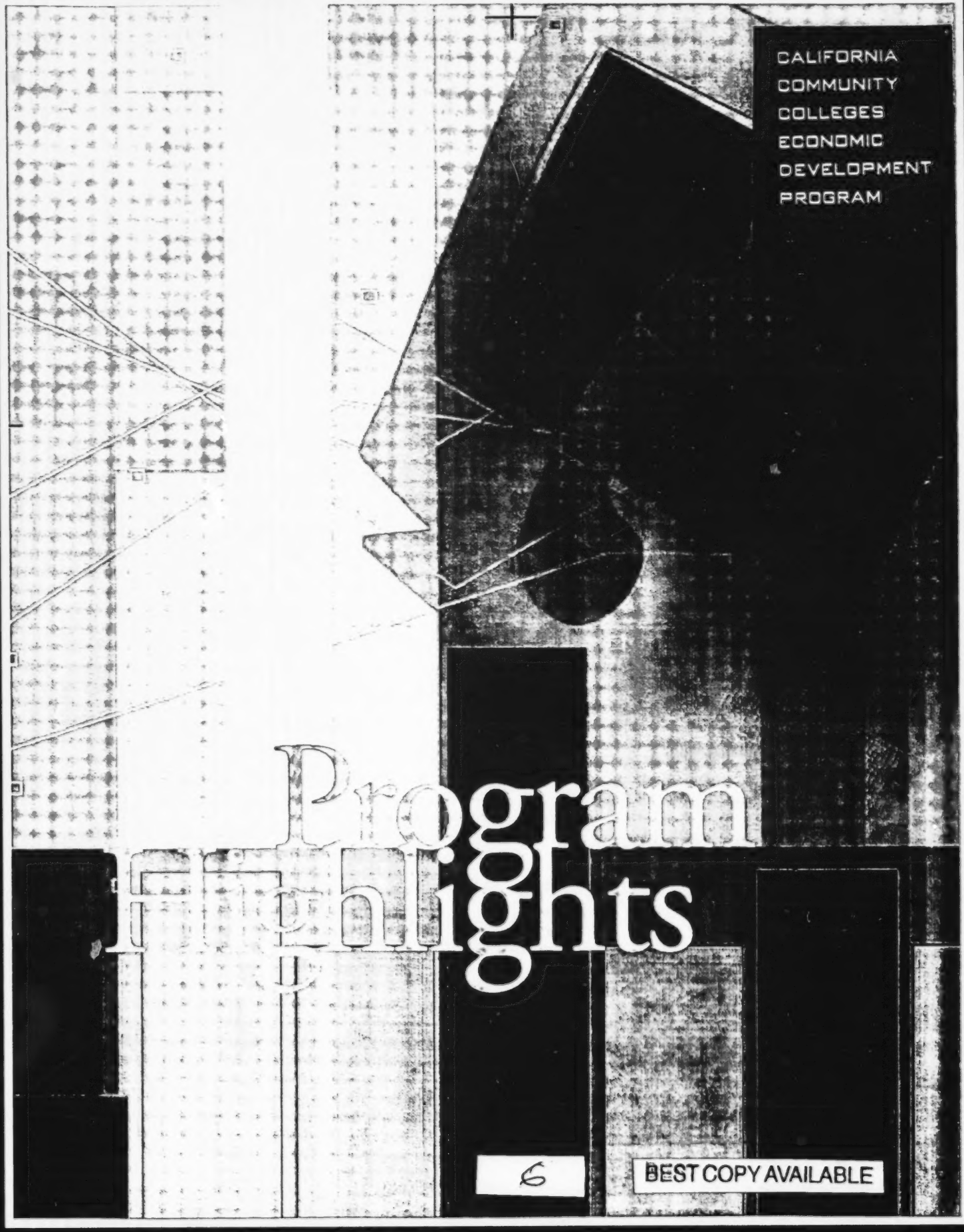
Mike Magee
Specialist, Economic and Workforce Development Program
(916)445-3898, mmagee@cccco.edu

California Community Colleges Chancellor's Office

Thomas J. Nussbaum
Chancellor

Victoria P. Morrow, Ph.D.
Vice Chancellor, Educational Services Division

Kay Ferrier
Dean, Economic and Workforce Development Program



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Program Highlights

The California Community Colleges Economic Development Program Annual Report (Annual Report) provides detailed information on program activities, accomplishments, and project descriptions.

The Program has established three levels of review, that include an internal assessment and monitoring of each project; an external economic impact study, and a comprehensive evaluation of each Initiative conducted by the Program's Advisory Committee. Each of these evaluation levels are described in detail in this report. Also, there are several sources where data is collected on the various aspects of the Program.

The Highlights Pages that follow represent these different levels of review, and include information for 2000-2001 Program results from all of the data sources. These Pages show that the Program supports curriculum development and instruction, and that valuable services are provided to students, incumbent workers and employers. The Program develops partnerships that create external investment, and has an excellent overall economic impact for the state.

In the previous two fiscal years, the economic impact study, supplemented with details from the on-line data collection system, made up the annual report. For fiscal year 2000-2001, all reporting resources were used to fully describe the activities of the Program, demonstrating benefits to colleges and students. Additional detail and narrative descriptions of the data and results are included in the sections that follow the Highlights Pages.

TABLE 1: OVERALL RESULTS

The first Highlights Page is labeled "California Community Colleges Economic Development Program Fiscal Year 2000-2001 Highlights – Expenditures and Activities Project. " Except for the additional investment figure of $61 million, the aggregate information on this table is reported information from the grantees' Project Data Summary form. This form is required of each grantee as part of their annual reporting requirements for expenditures by activity, courses developed and offered, job placements and contract education activities related to the grant. Samples of the courses are later described within the report, along with narrative descriptions of curricula and other activities that were supported by the Program's grants. Additional tables which break out the expenditures and activities by region and industry cluster are also included in the appendices. The Program supports a variety of activities such as instruction, workforce development and investment in economic activity. Table one provides a breakdown of these services and outcomes. On the left side is a broad overview of expenditures by eligible activities. 61% of Program funds supported instruction and workforce development. The right side highlights benefits to workforce

development, instruction, employers and the taxpayer. The results shown in the column on the far right are broken into two categories: 1) Results that support instruction and workforce development, and, 2) Results that support employers, investment and economic activity. The Program has become a catalyst for the development of new credit, non-credit and contract education courses for colleges. Nearly 30,000 student enrollments were reported in Economic Development Program initiated coursed in 2000-01. 86,000 employees received training through the Program. Business partners provided well over 50% of the required Program match. The Program analyzes its impact on job creation on two levels. Table 1 shows job placements reported by the grant's Project Directors. Jobs created by the Program are also analyzed through the external economic impact study.

TABLE 2 & TABLE 3: INVESTMENTS AND PARTNERS

At $19 million, the Regional Centers are under 50% of the Program's expenditures. Because of their long-term stability, the Regional Centers are able to act as hubs for resource development and outside investment as Table 2 demonstrates. The Regional Centers have obtained $61 million in additional resources from various sources that include business and industry donations, fees and contracts and other grant sources. Table 3 shows the number of private and public partnerships the projects reported. These Initiatives include: advanced transportation technologies, biotechnology, small business, applied competitive technologies, business and workforce improvement, environmental technologies, health care delivery, multimedia/entertainment, international trade, and workplace literacy. Information on each Initiative is included in the Program Description section of this report.

TABLE 4: EXTERNAL STUDY – WAGES

Table 4 on page nine describes the wage differential between Economic Development Program assisted companies and similar companies that were not served by the Program. Looking at both the mean and median wages, the table illustrates the fact that companies involved in the Program, which take time to provide training and work with colleges, pay much higher wages to their employees. The benefits of the Program support both the employer and employee, as required in legislation.

TABLE 5 & TABLE 6: EXTERNAL STUDY – ECONOMIC IMPACT

Tables 5 and 6 provide an at-a-glance view of the economic impacts as calculated through the economic impact study. This external process uses Employer Identification Numbers (EIN) from businesses that received in-depth technical assistance. The numbers are used to collect information from the Employment Development Department and the Franchise Tax Board to analyze the economic benefits of the Program. The economic impact study is described in this report, but more detail will follow in a separate publication that describes the data sources, and provides an analysis of the information provided in the summative evaluations over the last three years. Few workforce or economic development programs evaluate their macro economic impacts. Table 5 shows the value of new jobs and wage and salary income created, and Table 6 shows the return on investment to the state, and the Program's benefit-to-cost ratio. The return on investment figure shows that the Program is a rarity in that it pays for its initial costs in the generation of state tax revenues. The benefit to cost ratio shows that the Program returns 12 times the value in profits and wage increases of its initial investment. Most programs are considered successful if this ratio is 2:1.

TABLE 7: BUSINESS ASSISTANCE

Table 7 provides samples of technical assistance provided to businesses such as one-one counseling, environmental audits, regulatory compliance and learning laboratories. Businesses that receive in-depth assistance are those that are studied in the external economic impact study.

TABLE 8: STUDENTS, FACULTY, EMPLOYERS AND EMPLOYEES

Table 8 provides information from Strategic Initiatives on technical assistance and training that was collected through the on-line data collection system. The data shows the type and number of hours of service, and who received it.

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TABLE 1 California Community Colleges Economic Development Program Fiscal Year 2000-2001 Highlights[1] – Expenditures and Activities

Percent of Total Funding	Estimated Expenditures by activity	Eligible Activities in Education Code Section 88531[2] include, but are not limited to the following:
24%	$10.9 million	Curriculum development, instructional packages, credit and non-credit programs, faculty mentorships, staff development, in-service training, and worksite experience... (eligible activities: a, b, c, h)
15%	$6.9 million	Institutional support and professional development. (d)
14%	$6.2 million	Equipment purchases that support economic development and classroom activities. (j)
1%	$0.5 million	Subsidized student internships. (i)
21%	$9.3 million	One-on-one counseling, seminars, workshops, and conferences that contribute to the achievement of the success of existing business and foster the growth of new business and jobs in emerging industry clusters. (f)
7%	$3.2 million	Performance-based training on a matching basis with business and industry employers that promote continuous workforce improvement. (g)
6%	$2.9 million	Deployment of new methodologies and technologies. (e)
12%	$ 5.3 million	Other: includes services and activities that project directors determined did not directly fit a-j activities such as marketing, and other services to businesses
100%	$45,172,000	

Results reported by college Project Directors as part their annual reporting requirements

Results that support instruction and workforce development include:

- **499 New Courses**
  - Developed/Offered
- **307 Courses Developed**
  - to be offered
- **15,458 Students[3]**
  - in credit courses
- **14,474 Students[4]**
  - in non-credit courses
- **323 New Contract Education Courses**
  - offered as a result of the grant

Results that support investment and economic activity:

- **56,743 Business**
  - reported served by funded projects
- **93,667 Employees**
- **7,056 Job Placements**
  - reported by funded projects
  - 50 welfare recipients hired reported by 11 JDIF grants
- **$28 Million[5]**
  - industry/business match for funded projects
- **$61 Million[6]**
  - additional resources reported by Regional Centers

[1] More detailed information on activities is described in the Benefits and Evaluation sections. detailed information on expenditures by activity, industry cluster and region is included in the appendix. The primary source for the data on this table is from forms required for annual reporting by each grant.

[2] Education Code Section 88531 is included in the appendices. Eligible activities in this section are enumerated in this code section as (a) through (j) and are noted above in the appropriate funding groups.

[3] Student figures represents enrollments, not unduplicated numbers.

[4] Ibid.

[5] One-to-one match is required of almost every grant. Match can be from business/industry or other sources.

[6] Additional resources may include match for the grant requirements.

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TABLE 2 Highlights – Creation of Outside Investments in the Ten Strategic Initiative Areas[1]

Source	Dollar Value
Matching Resources (equipment, cash, services and facilities)	$29,651,388
Training Contracts, earned and paid	$6,551,974
Employment Training Panel – college acts as either a contractor or sub-contractor	$2,580,361
Certified Nursing Assistant Testing	$591,436
Endowments – Foundations and other Organizations	$9,326,127
Education and Research conferences	$20,000
Donated instruction/time from Universities and business	$18,500
U. S. Small Business Administration: Small Business Program	$9,500,000
California Manufacturing Technology Center: mini-grants	$334,635
Federal Grants: National Science Foundation, US Department of Labor	$479,043
Department of Developmental Services and Department of Social Services	$344,000
VTEA (vocational education) funds	$718,333
Other state and local grants	$824,035
Other state community college grants	$598,175
Total	**$61,538,007**

[1] *See page 23 for details on each Initiative.*

TABLE 3 Highlights – Program Partnership Activity

Strategic Initiatives Regional Centers	Public Partnerships Number	Private Partnerships Number
Workplace Learning Resource Centers	79	83
Small Business Development Centers	191	84
Centers for Applied Competitive Technologies	61	85
Centers for International Trade	213	82
Regional Environmental Business Resource Centers	123	110
Biotechnologies Centers	36	59
Advanced Transportation Technologies Centers	90	90
New Media/Multimedia/ Entertainment Centers	16	69
Centers of Excellence	31	25
Regional Health Occupation Resource Centers	107	67
Totals	**947**	**754**

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External Study and On-line Reporting System Information

Using an external economic impact study, the productivity of the Economic Development Program (Program) over the last three years has been described by the research consultant as consistently impressive. This study, also called a "summative evaluation," uses methodology developed in cooperation with the Legislative Analysts Office and the Department of Finance and is in its third year. To calculate the economic impacts, the summative evaluation uses employer data from the Franchise Tax Board and the Employment Development Department. The employer data is obtained by using the Employer Identification Numbers from companies that received in-depth technical assistance. This externally validated information is supplemented below with data from the on-line reporting system on services to employers that include: counseling, audits and regulatory assistance, assessments, technical assistance and learning laboratories. (For further details, see the Evaluation Process Section and the Benefits: Employer Assistance Section).

TABLE 4

FY 2000-2001 Economic Impact Study – Wage Data for 1998-2000

Economic Development Program Assisted Companies	Mean Wage received per worker	$44,661	Median Wage received per worker	$35,380
Not Assisted by Economic Development Program	Mean Wage received per worker	$37,421	Median Wage received per worker	$29,531

TABLE 5

2000-2001 Economic Impact Data

Value of New Jobs Created	Wage and Salary Income Created (direct)	Wage and Salary Income Created (indirect)
$361 million	$212 million	$148 million

TABLE 6

2000-2001 Economic Impact Data

Return on Investment[1]	Benefit to Cost Ratio[2]
This figure represents only the return in state taxes paid by both workers and businesses for each dollar invested from the Program.	This figure represents the dollar values of the program benefits divided by the program costs, i.e., each Program dollar spent returns $12 back in benefits.
$2.64 - $3.05	12:1

TABLE 7

FY 2000-2001 On-line Reporting System

One-on-One Counseling:		Environmental Audits and Regulatory Compliance:	Assessments:	Technical Assistance:	Learning Laboratories:
New Clients	Ongoing Clients	Number of Businesses	Number of Businesses	Number of Businesses	Number of Businesses
17,336	13,540	8,740	7,972	1,709	1,054

[1] ROI is in constant dollars, using the base year 2000 to compare values across years.

[2] Benefits include the changes in profits, and the differential of the wage increases. The costs are the Program expenditures.

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Technical Assistance and training are the primary services that all of the Strategic Initiatives provide. Many activities fall into these two main categories. Data from the on-line data collection system provides information on level of in-depth services in these categories, and who received the service. The table below summarizes this information for the Regional Centers.

TABLE 8 Program Activity Levels from the On-line Data Collection System

Strategic Initiatives Regional Centers	Hours of Service Delivered		Who Received Service			
	Technical Assistance	Training	Number Incumbent Workers Served	Number Students Served	Number Faculty In-Service Served	Number of Businesses
Small Business Development Centers	980,972	130,039	19,742		26	25,584
Centers for Applied Competitive Technologies	220,444	1,064,010	26,622		252	9,554
Centers for International Trade	20,500	33,900			213	8,371
Advanced Transportation Technologies Centers	7,814	142,491	2,642	6,781	544	5,778
Regional Health Occupations Resource Centers	471,534	260,011	13,733	2,508	820	5,156
New Media/ Multimedia/ Entertainment Centers	26,050	116,578	1,074	73,844	2,566	2,343
Regional Environmental Resource Centers	23,333	391,552	6,676	*	160	2,311
Workplace Learning Resource Centers	20,684	377,068	7,201	27,498	1,438	2,227
Biotechnologies Centers	20,324	34,944	1,265	*	1,482	543
Centers of Excellence	90,962	2,234				2,502
Total	1,882,617	2,552,827	78,955	110,631	7,501	64,369

** Note: The previous on-line data collection system forms did not require reporting student counts for the Biotechnologies Centers and the Regional Environmental Resource Centers. These initiatives provide services to students, and this information is collected on the Project Data Summary Forms. The new data collection system provides for reporting services to students from any of the funded projects.*

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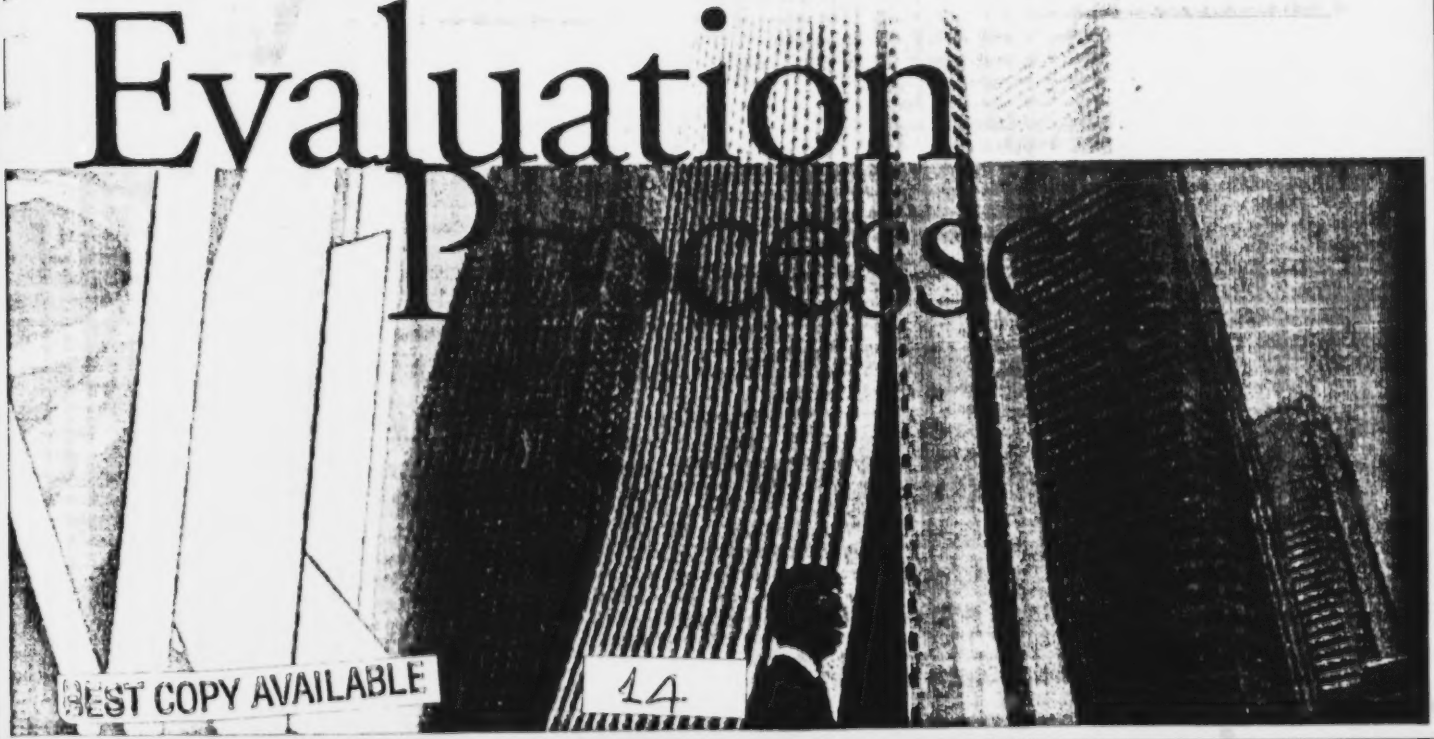
Evaluation Process



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Evaluation Processes

II

The Program has established three major levels of review with additional layers to support the evaluation process. The data included earlier in this report stems from these processes.

First, an internal assessment and monitoring of each project is conducted. Projects report outputs and outcomes that are included in the annual report.

The second form of evaluation is an external economic impact study (also called the summative evaluation). In this process, Employer Identification Numbers (EIN) are collected from businesses that received eight hours or more of technical assistance. These EINs are used to collect information from the Employment Development Department and the Franchise Tax Board to analyze the economic benefits of the Program.

The Program's Advisory Committee conducts the third level of evaluation. This Committee, established in legislation, reviews the Program's activities to determine their relevance. One of the methods the Committee uses in this process is a comprehensive, five-year review of each Initiative.

Each of these evaluation levels are described in detail below, along with the other methods of reporting and oversight. The appendices include detailed information under the Evaluation Listings, in the appendices, that include: Project Data Summary information on expenditures by activity and projects by industry cluster and region; samples of forms and information collected from the past and present data collection systems; the Advisory Committee's full Strategic Review Process; and, a sample five-year operational review report from the manufacturing initiative.

The Program conducts economic impact studies, collects information from project directors on services and expenditures, and reports to the legislature. The Program is reviewed by system-wide organizations, while each grant is also held accountable at the local district level. In 2000, the Program was a network of 105 regional, business resource, technology transfer and international trade Centers, 15 network capacity building projects, 99 regional business resource, assistance and innovation collaboratives and 19 job development incentive training funds. Each is held accountable by the Chancellor's Office in a number of ways. Annual evaluations of the Program have been conducted each year since 1991. The evaluation methodology is continuously being improved. According to the California Budget Project 2002 report, "Maximizing Returns: A Proposal for Improving the Accountability of California's Investments in Economic Development," this Program is one of only 17.8 percent of all state economic development programs that evaluates both its output and its outcomes. Program review and oversight is conducted in the following ways:

A Internal Assessment And Monitoring – Projects Report Outputs And Outcomes To The Chancellor's Office

Applications

As part of the Request for Application (RFA) Process, each grant is required to submit a Workplan that is based upon a statement of need and strategic priorities. The RFA Process also requires that each project submit a management plan outlining their capacity to perform and meet program requirements, including data collection and program evaluation.

Quarterly and Annual Reporting: Project Directors report on services to students, faculty, incumbent workers and employers

The Chancellor's Office oversees each grant to make certain that its goals and objectives are being met. Project directors are required to submit quarterly and annual reports on expenditures, the types of services, and who was served. Annual reports include narrative descriptions of project accomplishments, barriers, and the status of their workplan's objectives.

Since 1995, project directors have submitted quarterly reports on project activities. In 1998, the reporting system became an internet-based, online data collection system. This system has been updated and revised, and a new electronic data collections system is in place for the second half of fiscal year 2001-2002. The online data collection system reporting forms included business participants, technical assistance, training provided, partnerships, and products. Forms target the unique aspects of an Initiative. For example, Regional Environmental Business Resource Centers report on regulatory compliance counseling, while Centers for International Trade track business leads and letters of credit.

As the program has grown, interest has increased in further developing this internal reporting system to integrate and combine its information with the economic impact study, also known as the summative evaluation. The new, 2002 online reporting system is "event-based," and will leave little room for misinterpretation of definitions. The new system will be able to sort and link data and capture unique elements the previous system could not.[10]

As part of their annual reporting requirements, project directors identify expenditures by eligible activity, courses developed, courses offered, job placements, matching resources received, and contract education activity that resulted from the grant. The reporting form for this activity is called the Project Data Summary form, and it will continue to be a part of the new online data collection system. The 1999 reporting instructions, manual and Project Data Summary form, are listed on the available resources list in the appendices. The previous two annual reports focused on the economic impact or summative evaluation to calculate economic impacts, and it supplemented this with information from the online data collection system to describe activities. Information from the Project Data Summary Form on expenditures by activity was also added. However, there was much more information collected from the Project Data Summary Form that was not highlighted. Project directors not only reported expenditures by activity (e.g., curriculum development, one-on-one counseling, etc.) but they also reported courses offered, courses developed and supported, contract education activities, and job placements that resulted from the grant funds. Due to evaluation and reporting priorities for the previous two years, this information was not reported. For this annual report, all of the information reported on courses, students and new curriculum reported on the Project Data Summary Forms has been used, and is further supplemented by narrative reports and descriptions from the grantees and the statewide Initiative Directors. A sample of the Project Data Summary Form is included in the appendices.

[10] *A sample of data collected from the new system is in the attachments.*

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Employer Identification Numbers (EIN) of companies that received eight hours or more of in-depth technical assistance are collected through the online data collection system. These numbers are then used to obtain data from the Employment Development Department and the Franchise Tax Board. This data enables the Program to calculate economic impacts by determining the differential between the businesses that were served by the Program and those that were not. This lays the foundation for the external evaluation, also known as the summative evaluation, which is described in the section that follows. The economic impact data obtained through the summative evaluation continues to be incorporated in this annual report to present a complete description of the Program.

The Program's impact in certain areas, such as supporting the development of courses for the classroom, is underrepresented. In many cases, community colleges have taken courses developed for an immediate need or certification, and have institutionalized these courses into the curriculum. This information has yet to be tracked. Future plans include developing the ability to track courses developed and or supported by Economic Development Program funds through the Chancellor's Office information system that currently records academic courses and participation.

B. Oversight Boards And Committees

Local Districts:
Each district that receives a grant award is obligated to provide oversight and accountability for the expenditure of funds to the Chancellor's Office. Audits are conducted locally by the district and of the Chancellor's Office files.

Board of Governors:
This body of gubernatorial appointees has oversight for all policy and budget matters. This body approves the expenditure plan and the grant awards by the Economic Development Program.

Consultation Council:
This is the legislatively created advisory committee made up of constituency groups representing the academic senate, CEOs, students, etc., that advise the Board of Governors. The Consultation Council reviews the Economic Development Program's budget, policy and legislation.

Workforce and Economic Development Advisory Committee (WEDAC):
A group of vocational education deans, economic development practitioners and community college program participants. This group provides input on policy and implementation procedures.

Economic Development Program Advisory Committee (EDPAC):
The EDPAC is a legislatively created body that advises the Board of Governors and conducts strategic reviews of each Initiative. It's purpose and evaluation processes are described in part "E" of this section.

C. Improvements To Data Collection System

A new "event-based" system tracks activities and offerings on an ongoing basis, and will be able to replace both the Project Data Summary Form, and the prior system (sample of the new outcomes reporting is in the appendices). This system has been implemented for FY 2001-2002 projects and includes several improvements over the data collection system that was used for reporting in previous fiscal years. The new system will be event based and designed to capture data on services as it occurs, as opposed to the previous system, that required project directors to enter data quarterly using forms that summarize activities. The events are broken into the following categories: Training Services, Technical Assistance, Partnerships, Curriculum Development, Marketing and Outcomes. A new, more intuitive Internet based interface to the database will make it clear how to enter data and provide more consistent collection of data across the network.

A second key enhancement of the new data collection system is the capability to capture participant data and link participants to specific events. For example, the system will be able to collect information on whether the participant was a student, business, or college and what training events or technical assistance events they participated in and what outcomes

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resulted for the participant. The system also has the capability to collect Social Security Numbers, voluntarily provided by individuals, and Employment Identification Numbers that are reported for businesses served for use in the summative analysis or student follow up. This will facilitate the generation of a larger sample size when comparisons are run to determine the impact generated for those businesses and individuals that received services through the Economic Development Program ED>Net versus those that did not receive services.

Finally, the new system will use the database as a management tool. Project Directors, Initiative Directors, and Project Monitors will have access to online reporting that allows them to track the progress of the individual projects and the participants they serve. A sorting and feedback capability will allow the project managers to identify best practices and focus on those activities that produce the greatest results for the program, thus creating the greatest economic impact for the State.

D. Summative Information – External Economic Impact Studies

The external economic impact study, or summative evaluation, is the second major level of review (after internal reporting). It provides information on wages, profits, and jobs created which are used to calculate the Return-on-Investment, and the Benefit-to-Cost ratio. Performance data was developed using a "quasi-experimental" approach compares companies that receive Economic Development Program services with a matched sample that did not. Job generation, pay and other factors are compared. For example, over the period 1997 through 1999, total employment at companies receiving Economic Development Program services grew at an average annual rate of 6.1 percentage points faster than companies that did not receive these services. As noted, from mid-1997 through mid-1999, companies receiving Economic Development Program services generated an additional 10,406 jobs over companies that did not receive Economic Development Program services. To obtain these calculated values, Employer Identification Numbers (EIN) are used. The EINs used both for the Economic Development Program sample and the samples of comparison companies were designed to be the same. Only companies that had a continuous, active business presence in the California economy during all three years were used. Firms that went out of business, merged, sold out, or exited the Employment Development Departments Unemployment Insurance database for any reason were excluded from the samples. This provides us with a consistent set of companies for all of the three years, both for the Economic Development Program sample, and for each of the comparison company samples. This year, there were 501 companies in the Economic Development Program sample and also in each of the three comparison group samples. The same companies were consistently used in calculating each year's totals, means and medians.

The Benefit-to-Cost (B/C) ratio and the fiscal Return-on-Investment (ROI) are two different ways of measuring results. The B/C ratio is often used in public sector programs to evaluate whether a program is supporting itself in terms of its economic effectiveness. A B/C ratio of two or greater is usually considered successful. The B/C ratio includes all economic benefits generated by Community College Economic Development projects in the California economy. That includes the market value (i.e., remuneration) of new jobs, higher wages and increased profits. The ROI is a conservative measure because only that relatively small part of the total economic benefit that ends up being paid as income taxes to the State of California is included in the ROI value used in the external economic impact evaluation. The B/C ratio is based on benefits calculated from the 3-year difference in earnings and profits divided by the cost of the program.

Three years is used because it takes time to see benefits result either in increased wages or in improved business activity. Benefits include wages and salaries to new workers, plus increases in wages to existing workers. For increases to wages, only workers that were involved in the training are counted, using the wage differential multiplied by the workers trained.[11]

The ROI represents the value of expected state tax revenues that resulted from the economic impact of the Program, compared to the costs of the Program. The fiscal Return on Investment demonstrated by the Program for 2000-2001 was between $2.64 and $3.05. This is the Net Present Value (discounted for the time value of money) of income tax collections by the State of California. This number is a remarkably high ROI because relatively few programs pay for themselves. If a program has a B/C ratio significantly greater than one and an ROI also greater than one, the program may be considered cost effective. That is, the benefits to the economy are equal to the cost of the program, and in effect there is no net cost to the taxpayer. Such an outcome is seldom seen. The Evaluation Methodology for the economic impact study and related reports are listed on the resources page in the appendices.

[11] *Sources: The Employment Development Department provides wages and employment data. Data on business profits comes from the Franchise Tax Board. Costs: Total budget of Program (e.g., for 1999-2000 - $35 million).*

E. Economic Development Program Advisory Committee – Annual And Operational Review Processes

The Economic Development Program's Advisory Committee (EDPAC) conducts the third major level of review. The EDPAC was established by legislation, and the members represent the interests of labor unions, state agencies, CEOs, faculty, students, and industry representatives. The EDPAC advises the Board on Program policy and the expenditure of funds, helps to develop funding criteria, and assists with program evaluation. The number of faculty and labor union members has increased to include three representatives from the Academic Senate and three representatives from trade unions.[12] This Committee's Strategic Review Process document is available, and listed in the resource list in the appendix. To accomplish their tasks, the Committee uses the following processes:

1. Conducts a yearly review and tracking of state and regional economic developments and emerging technologies. It tracks the performance of Initiatives using data from the statewide, internet-based data collection.
2. Reviews each Initiative's annual report.
3. Conducts detailed operational reviews of each Initiative. The ten Initiatives are on a five-year cycle, with two Initiatives evaluated each year. To date six operational reviews have been conducted of the following Initiatives:
   - Environmental Technologies
   - Small Business Development
   - Advanced Transportation Technologies
   - International Trade
   - Workplace Learning Resources
   - Applied Competitive Technologies[13]

The EDPAC Strategic Review Operational Guidelines, and one of the Operational Review Reports are attached in the appendix.

[12] *A current membership list of the EDPAC is attached.*

[13] *The CACT five-year operational review report is attached in the appendix. Additional reports are also available.*

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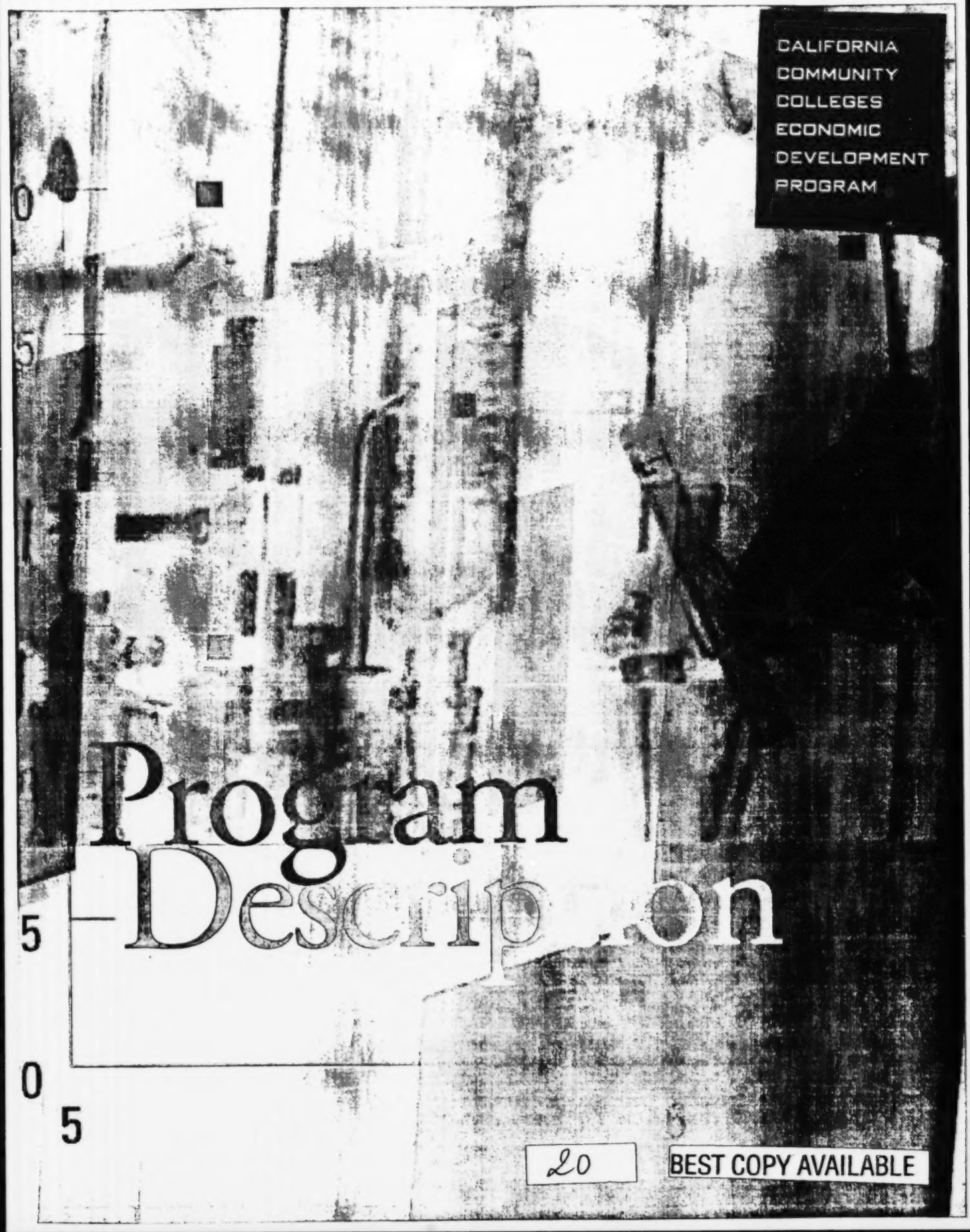
CALIFORNIA
COMMUNITY
COLLEGES
ECONOMIC
DEVELOPMENT
PROGRAM
Program
Description
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Program Description

20 III

A. INTRODUCTION

The Program addresses student and workforce needs for current knowledge and skill development. The Association of American Community Colleges, in its study "2001 Community Colleges in the Knowledge Economy," found all of the following:

1. The sectors of the economy with the most educated workers are growing the fastest, increasing the demand for credentials and degrees. In 1998, 86 percent of prime-age, high-tech workers had attended a postsecondary institution, up from more than 60 percent in 1973. Nineteen percent of high-tech workers in 1998 had coursework but no degree, while 15 percent had associate degrees and more than one-half had bachelor's degrees. Health care, business services, and related fields have similar requirements.

2. Ultimately, successful careers are best guaranteed by degree education beyond high school and long-term access to general and job-specific learning. Community colleges are ideally positioned to continue to evolve with these trends as both academic and vocational credentials multiply, and as the line between academic and applied learning blurs. The United States Office of Vocational and Adult Education, in a study, "Turning Skills into Profit: Economic Benefits of Workplace Education Programs," found that more than 40 percent of the U.S. workforce and more than 50 percent of high school graduates do not have the basic skills needed to do their jobs.

3. The California Economic Strategy Panel has concluded that California's new economy is an economy of regions, driven by various industry clusters or concentrations of firms with potential for creating and sustaining regional wealth. The panel noted that regions are not defined by political boundaries, but by common economic interests.

The California Community Colleges Economic Development Program (Program), through its various industry and worker support programs, continuously demonstrates its capacity as an essential component of the region-by-region infrastructure that is required to sustain the competitiveness of California's new economy. The Program was started with emergency training funds through the Governor's budget in 1982.[14] The Program's capacity and positive outcomes have been validated in consecutive annual program evaluation reports since the program's inception. Established in statute in 1991, the Program began an extensive statewide planning process, utilizing a broad range of representatives from community colleges, businesses, and workers. The process resulted in the adoption of a statewide strategic plan for community college participation in California's economic growth.[15]

[14] See the appendix for a chronology of the Program that includes legislation and budget appropriations.

[15] The Program's Strategic Plan, and 1998 updates are included in the appendix.

Regional workforce development and business resource assistance plans, including resources for nonprofits, have been developed and adopted for each designated region of the state. These plans provide an assessment of workforce and business development needs and rapid response strategies for community colleges. This comprehensive program represents a well-planned network of services focused on meeting the needs of business and the incumbent workforce in each major economic region of California in a timely and flexible manner. The Program's Initiative areas and short-term grants have benefited new workforce entrants, current workers, faculty, colleges, and employers.

Economic development was added by the Legislature to the statutory mission of the California Community Colleges by Chapter 1057 of the Statutes of 1996 (Education Code Section 66010.4(a)(3)). The incorporation of economic development into the mission of California Community Colleges has increased the system's active support of regional economic development. It was the intent of the Legislature to maximize the Program's capacity and mission to provide critical support for continuous workforce improvement and economic development in a manner that is adaptive and responsive to the changing needs of regional economies.

> *Education Code* Section 66010.4(a)(3): "A primary mission of the California Community Colleges is to advance California's economic growth and global competitiveness through education, training and services that contribute to continuous work force improvement."

The Program supports this mission. However, at the 2000-2001 funding level of $45 million, the Program is less than one percent of the community college system budget. The Program is a source for developing and implementing training and curriculum in key strategic industry sectors that will create the jobs of the future. A trained workforce, with the ability to respond to changing skill sets, is the key economic development and job retention/creation issue for the state. The Economic Development Regional Centers act as incubators that link colleges with changing needs and trends. The Regional Centers also offer fee-based services to businesses and non-profits.

The Program pioneers new courses in concert with local businesses to insure training is relevant and to create and retain jobs. The Program was specifically designed to leverage local college educational resources across regions of the state and to leverage best practices and outstanding curriculum. As part of the educational system, the Program assists colleges in their innovation and development of new curriculum, faculty instruction, faculty internships and workforce training. Economic Development projects can expedite the local development of courses and enable colleges to be responsive to immediate workforce training needs and emerging technologies. Many of the courses become for-credit courses that could not have been as quickly or as easily developed to answer the immediate and life-long workforce training needs of students and incumbent workers.

In higher education, economic development typically means the provision of responsive career training linked to business needs, not services to business. Of the ten major Initiatives of the Economic Development Program of the California Community Colleges, also called ED>Net, two are business development oriented. The majority of the Program funds go to capacity building and workforce development. The Program is guided by the Economic Development Program Advisory Committee (EDPAC). The EDPAC's role is described in the Evaluation Section and a list of the current membership is included as Appendix 3.

B. THE PROGRAM'S FOUR MAJOR COMPONENTS

For fiscal year 2000-2001, there were four major components of the Economic Development Program that had specific performance requirements. These included Regional Centers, Statewide Network Leadership, Industry Driven Regional Collaboratives, and Job Development Incentive Training Fund.

1. Regional Centers

Regional Centers are mandated to follow prescriptive criteria and a highly delineated scope of work and require a significant commitment from the college. Regional Centers are the primary delivery system for the Program's ten Strategic Priority Initiative Areas. Strategic priorities are described in legislation, and the funded strategic priority areas of the Program are called Strategic Priority Initiative Areas. These include: Advanced Transportation Technologies, Biotechnologies, Applied Competitive Technologies (Manufacturing), International Trade Development, Business and Workforce Improvement, Health Occupations, Multimedia, Environmental Technologies, Small Business Development, and Workplace Learning. The Regional Centers generate and produce the majority of the statistics and results in the Program's Annual and Evaluation Reports. For local colleges, Economic Development Program Regional Centers are the primary links to regional industry clusters, providing a means for the college to identify the training needs of California business and industry. To support local efforts, Regional Centers have partnerships with Workforce Investment Boards, Economic Development Corporations, Chambers of Commerce, and Professional/Trade organizations.

2. Statewide Network Leadership, Organizational Development, Coordination, Information and Support Services

This network helps to implement the Strategic Priority Initiatives and provide technical assistance. There are three elements to this component: (1) the Statewide Coordination Network, which provides operational, logistical and marketing support; (2) the Initiative Directors, who provide technical assistance and support to the Strategic Priority Committees and Regional Centers; and (3) Business and Workforce Performance Improvement, which coordinates resources and builds colleges capacity. All three elements assist the network to build system capacity to deliver up to date education and services in areas that will create well-paying jobs. The capacity development of the system also takes place because of the needs of small and medium sized business are assessed, and the coordination of resources provides for a system-wide response to economic development opportunities. Projects funded under this Program component include marketing the Program's benefits, technical assistance to colleges, proposal writing and professional development opportunities for faculty, access to research opportunities and initiative development to benefit students. The three components of the leadership and coordination network work closely with the State Chancellor's Office to support its role in policy, funding, program review and funding.

3. Regional Business Resource Assistance and Innovation Network Collaboratives

include the Industry Driven Regional Collaboratives (IDRCs) and Regional Consortia. IDRC projects are short-term (maximum 24 months) and enable community colleges to meet specific regional industry training and education needs. This component is one of the few flexible resources available that enables colleges to purchase equipment and develop new programs. See pages 30 through 31 for more detail and project examples.

4. The Job Development Incentive Training Fund

(JDIF) is a specialized short-term Program component that creates training opportunities and provides incentives for employers to create entry-level positions at an acceptable wage level for the attainment of self-sufficiency, either within their own company or through their suppliers, for welfare recipients and the working poor. See pages 28 through 30 for more detail and project examples.

In addition to the funded categories above, the Program works in concert with colleges to develop new courses, curriculum, and to enhance contract education opportunities. The Program's network is strengthened through ten targeted Strategic Priority Initiative Areas. The primary delivery system of the Initiatives is the Regional Centers. The Initiatives and Centers create resources, donations, investments and benefits to colleges and employers. Below are details on the Initiatives, their Regional Centers, and investments and additional resources to colleges created as the result of the Economic Development Program's activities (pages 33-37).

C. DESCRIPTIONS OF THE TEN STRATEGIC PRIORITY INITIATIVE AREAS

1. Health Occupations Initiative and Resource Centers

The purpose of the Health Care Initiative is to identify workforce needs of the health care delivery system and develop solutions through a comprehensive problem-solving process. This process may include assessment and analysis, planning and development or implementation and evaluation. The role of the Regional Health Occupations Resource Centers (RHORC) is to facilitate collaboration between the education segments and the health care delivery system to respond to identified needs. The mission of the RHORC is stated as: "Promoting the advancement of California's health and economic growth through quality education and services focusing on workforce development and continuous workforce improvement in health care delivery." The RHORCs are well connected to for-credit education programs and vocational education.

2. Biotechnologies

Biotechnology uses the natural biological capabilities of microbial, plant and animal cells for the benefit of people. An applied science, biotechnology couples scientific and engineering principles with commercial considerations to develop and improve products and processes made from living systems. California is the home to the almost 30% of the nation's biotechnology companies, about half the biotech employees, and about half of all the biotechnology revenue in the United States. Between 85,000 – 100,000 Californians are currently employed in the biotechnology field. In 2000, revenue generated in California by biotechnology was approximately $8.4 billion. In the academic year 2001-2002, approximately 700 students, most of whom were post-bachelor's degree, were enrolled in either biotechnology courses or programs in 30 of the 108 Community Colleges. Another 23 Community Colleges are creating or have created a course or program in biotechnology but do not yet have students enrolled. The Biotechnology Initiative Centers support biotechnology courses and programs in these 53 community colleges, as well as several colleges that incorporate biotechnology content into mainstream biology courses. This Initiative is well integrated

into college programs and draws on faculty for expertise. In addition, each Regional Center brings its own unique aspects to the Initiative, these include: the Northern California Biotechnology Center funds a consortium of ten colleges in the San Francisco Bay Area; the North Valley and Mountain Biotechnology Center serves a large area by a unique set of email listserves; the San Joaquin Biotechnology Center focuses on a mobile lab and the bioscience companies in the San Joaquin Valley rather than solely on biotechnology industry; the Central Coast Biotechnology Center continues sharing its two sets of mobile labs with regional colleges and high schools and participates in the non-profit biotech institute that this Center started in the region; the Los Angeles-Orange County Biotechnology Center connects high schools, community colleges, and universities in a continuous flow; and the Southern California Biotechnology Center concentrates on bioinstrumentation and biomanufacturing in the region.

(3) Advanced Transportation Technologies

The Advanced Transportation Technologies (ATT) Initiative trains technicians to meet the challenge of tomorrow's imminent transportation technologies.. The ATT Initiative includes ten Centers that provide training in the areas of alternative fuels, alternative-fueled vehicles (AFV), intelligent transportation systems, wireless communication and newly emerging AFV technologies. Through the coordination of the ATT Initiative, employers' ATT needs are assessed resulting in the development of meaningful technical training programs for students. The results are consistent, clear, replicable curriculum, services and programs tailored to unique regional needs.

(4) Applied Competitive Technologies

Centers for Applied Competitive Technologies (CACT) enhance the competitiveness of California's small and medium-sized manufacturers by facilitating the transfer and adoption of advanced and environmentally-sound manufacturing technologies and techniques by assisting in the deployment of new technologies. The CACTs provide continuous improvement techniques, allowing California manufacturers and their employees to remain competitive in changing markets and a global economy. CACTs share five common attributes: (1) a demonstration site built around a computer-integrated manufacturing and/or process technology; (2) a philosophical foundation based on continuous improvement and total quality principles; (3) a capacity to provide training and technical services to small- and medium-sized businesses in advanced management and manufacturing process technology; (4) a training environment for workforce skills enhancement and technology development; and (5) an integrated approach for technology deployment and educational services. CACTs have developed quality partnerships with business and industry, complementary service providers and professional organizations.

5. International Trade Development

The New York Times and The Economist have recognized international trade as one of the three pillars of California's economic strength. The three pillars are tourism, technology, and trade. In 1999, California exports of manufactured goods broke the $100 billion mark for the fourth year in a row. Total exports reached $107.4 billion. This represented a healthy growth of 2.4 percent for the year. California exports in 1999 directly and indirectly supported approximately 1.29 million jobs.

While there are tariff and non-tariff barriers to trade, there is also an "internal" barrier. The major obstacle to getting more businesses to export and seek foreign markets for products and services is the lack of expertise and confidence by small and medium sized businesses. The goals of the Centers for International Trade Development (CITDs) are to enhance the competitive strength of California businesses in the international trade marketplace and support international trade development in their local communities. The CITDs strengths include direct assistance to small and medium sized businesses by experienced counselors providing transactions-oriented technical assistance through one-on-one counseling, seminars, multi-part training series, trade leads, foreign market research and prospect identification. The CITDs have also assisted community colleges in internationalizing curriculum and developing specialized courses in international trade.

Mexican International Trade Centers: A Special Designation SB 213 (Chapter 959, Statutes of 1999) established the Mexican International Trade Centers to increase Mexican export opportunities for California. These Centers are administered through the 14 Centers for International Trade Development, plus four community college affiliate sites named in the legislation.

6. Small Business and the California Small Business Development Program

Small businesses are an important part of California's economy. These Centers generate jobs, provide economic opportunity and flexibility, and boost economic output. California is home to 2.6 million small businesses, including the self-employed. 7.5 million people, or half the state's employment is in small business. 98% of all California businesses have fewer than five employees.

The purpose of the Small Business Development Center (SBDC) Initiative is to grow California business, through the delivery of one-on-one counseling, seminars, workshops, conferences and other technical activities. These services contribute to the achievement of the success of existing business and foster the growth of new business and jobs. Small business services include management, marketing, financing, accounting, strategic planning, regulation, taxation, capital formation, procurement, human resource management, production, operations, agribusiness, computer applications, limited business law assistance, office automation, site selection and many more areas of small business assistance. This Initiative is part of a national program and is a partnership with state and federal agencies.

(7) Workplace Learning Resources

Through twelve Centers, the community colleges provide business and industry with a variety of workplace learning services, including occupational skills assessments, task analysis, basic skills, English as a Second Language, analytical and problem solving skills and teamwork. Services are customized and flexible to meet incumbent worker upgrade training needs. These services are critical to California's ability to provide a highly trained and diverse workforce and reach the working poor who have not attended college.

(8) New Media/Multimedia/ Entertainment

Centers meet the current needs for the multimedia/entertainment industry by serving businesses with appropriate workforce preparation/employee upgrade services through training. The Regional Centers provide services ranging from faculty in-service training to business-focused instructional offerings and expanded contract education. In California, one of the fastest growing business sectors is the emerging New Media/Multimedia/ Entertainment Industry. Businesses included in this sector produce and support internet/intranet websites, design interactive digital game and educational software, generate feature film animations and special effects, prepare two and three-dimensional graphics, produce digital video titles, compose digital music soundtracks, or develop software tools to support the above mentioned activities. Across the state, this industry's business leaders indicate that an insufficient supply of trained individuals exists to meet the workforce needs of this rapidly expanding sector. The shortage of skilled workers is partly caused by difficulty in finding a new type of employee: a hybrid possessing both artistic skills and experience using a wide range of computer software skills. This issue spans across new hires, retraining and upgrade training needs. As a result of industry shortages, community college faculty needs are also impacted.

(9) Environmental Technologies

Regional Environmental Business Resource and Assistance Centers (REBRAC) coordinate statewide programs and services designed to mitigate the impact of environmental compliance regulations. These regulations specify the manner in which businesses may handle, store, use and dispose of hazardous materials, as well as regulate air and water pollution and traffic congestion and help minimize the production of waste. The Centers provide four basic services: (1) compliance counseling, (2) applied technology counseling (including energy conservation), (3) financial counseling and (4) environmental audit assistance. The Centers assist in the development of model certificate and associate degree programs in environmental technologies.

(III) Business and Workforce Performance Improvement Centers of Excellence

Centers of Excellence help to enable colleges achieve a larger market share of outsourced training by connecting businesses with the colleges. An Economic Development liaison at each regional center, working in conjunction with the Regional Consortia, accomplishes this through regional marketing to associations and employers. The nine Centers of Excellence also help Economic Development Program funded projects and the contract education delivery system make the shift to a performance-based delivery system. Centers' Performance Consultants assist colleges in conducting before-training performance assessments that link the appropriate training or non-training solutions to the employer's business goals. The Centers also provide coaching to workforce practitioners in order to increase the colleges' capacity to deliver performance-based training and services to employers.

D. MORE ON THE STORY OF THE REGIONAL CENTERS' BENEFITS

Collectively, the Regional Centers are the Economic Development Program's long-term delivery structure. These Regional Centers provide services to students and work with businesses to create jobs. As opposed to Industry-Driven Regional Collaboratives, Centers provide regional sites to efficiently respond to employer and worker needs to support Strategic Priority Initiative Areas by providing a foundation for the long-term sustained relationship with businesses, labor and colleges in the region. The Regional Centers' structure provides the most impact for the dollar, using the efficiency of an existing infrastructure. This infrastructure enables the Regional Centers to obtain outside investment, as shown in the Highlights section on page 10. Regional Centers provide professional and curriculum development, deliver customized, responsive training and develop business, industry and labor partnerships. Centers also provide technical assistance to colleges within their region as needed to meet the business and workforce education and training needs in their districts. For example, the College of the Canyons manufacturing center assists Antelope Valley and Allan Hancock College in developing their vocational training programs in manufacturing and addressing the training needs of their local manufacturers.

Centers and their statewide Initiative have advisory committees with industry representatives to identify workforce needs. The manufacturing program, for example, has a special aerospace advisory committee co-established with the Technology Trade and Commerce Agency. Regional Centers develop working partnerships with community-based organizations, non-profits, other state and federal agencies, and businesses and employers who donate resources in the form of labor, equipment and money. Multimedia Centers have obtained faculty and student internships and received donated software and computer systems from major film and animation studios.

Centers are a resource point for contract education services for incumbent worker training. All Regional Centers

act as hubs for equipment donation and strategic partnerships that each college alone could not provide. Surrounding colleges benefit from regional labs, faculty expertise and non-duplication of resources with a region. The Governor recognized the readiness of the center infrastructure when he chose the Centers for International Trade Development for a specialized designation as Mexico Trade Centers, and allocated additional $2.1 million for direct services because of their ability to put an implementation plan together immediately. Recently the Regional Health Occupations Centers received a $1 million augmentation for their ability to develop high-end responsive specialty nursing programs and have recently received a $2.2 million endowment grant as well.

The Initiatives and Regional Centers that implement the objectives, have developed interagency agreements and Memorandums of Understanding (MOU) that have created matching dollars from federal, foundation and state funds, that include the Small Business Administration, Employment Training Panel (ETP) and the California Endowment, and donations of equipment, materials and other resources from industry and fee based contracting. The Small Business Development Centers at community colleges leverage $9.5 million in federal funds, and the Technology, Trade and Commerce Agency contributes $2.5 million to the Program. Because of their recognized stability and strength as a statewide resource, Regional Centers are able to leverage and obtain millions of dollars in additional resources beyond their required one-to-one match. For example, the Centers for Applied Competitive Technologies supplement their 1999-2000 grants by $9 million, in part through collaborative ventures with the California Manufacturing Technology Centers.

The Centers for Applied Competitive Technologies, are not unique in obtaining outside investments, in fact, one of the key strengths of the Regional Centers is their ability to obtain additional resources. The grant funds provide the stability and resources essential to competing for other resources, and show business and industry that they have the statewide infrastructure that would support, and successfully use additional

TABLE 9 California Community Colleges Economic Development Program Highlights
Creation of Outside Investments for FY 2000-2001
The Ten Strategic Initiative Areas

Source	Dollar Value
Matching Resources (equipment, cash, services and facilities)[16]	$29,651,388
Training Contracts, earned and paid[17]	$6,551,974
Employment Training Panel – college acts as either a contractor or sub-contractor	$2,580,361
Certified Nursing Assistant Testing	$591,436
Endowments – Foundations and other Organizations[18]	$9,326,127
Education and Research conferences[19]	$20,000
Donated instruction/time from Universities and business	$18,500
U. S. Small Business Administration: Small Business Program	$9,500,000
California Manufacturing Technology Center[20]: mini-grants	$334,635
Federal Grants: National Science Foundation, US Department of Labor	$479,043
Department of Developmental Services and Department of Social Services	$344,000
VTEA (vocational education) funds	$718,333
Other state and local grants	$824,035
Other state community college grants	$598,175
Totals[21]	$61,538,007

[16] Matching Resources (cash, equipment, services): The largest category, this includes numerous local and partner donations. For example, it includes a $17 million facility for Advanced Transportation Technology Centers. Sizeable in-kind and equipment donations vary from year to year, for example in FY 99-00, IBM donated over $30 million in robotic equipment. Regional Centers are often the recipients of donations of machines, software and computer equipment.

[17] Training Contracts/Fee Based: Regional Centers often use their entrepreneurial resources to contract directly with businesses to provide training to incumbent workers. Used by nearly all of the community colleges, this delivery system is known as "Contract Education."

[18] This year the Regional Health Occupation Resource Centers were able to obtain $8.5 million in endowments from hospitals, foundations, and other resources.

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investments. Without their base funding from the Chancellor's Office, the Centers would not have the infrastructure or the resources to seek out business and industry donations, and federal grants. The Initiative Directors provided the information from the Regional Centers, even though there are no reporting requirements for additional resources. For the individual projects, although match is required, it can come from college resources or business and industry investment. As shown on the Highlights page 10, more than half of the match was through business and industry. The table on the previous page goes beyond the reported match, revealing additional investments that were obtained by the Regional Centers. This is a conservative estimate for the Program because Industry Driven Regional Colloboratives, and Job Development Incentive Fund grants were not included. This investment can be substantial. For example, one of our project administrators stated that their Industry Driven Regional Collaborative project enabled them to obtain an additional $4 million investment from business because they recognized the assets and capabilities of the district as a result of the grant. The table on the following page demonstrates the strength of the network of Regional Centers and their collective ability to compete for grants, win contracts and act as a stable host for partnerships and donations.

[19] Education/Research/Donated instruction: An example in this category is the Biotechnologies Centers which have tapped into researchers and industry professionals who have donated their instruction and waived fees for conferences and events.

[20] California Manufacturing Technology Center: This 501c3 firm partners with the Centers for Applied Competitive Technologies, and other community colleges to assist small to medium sized manufacturers and incumbent workers.

[21] Information on Outside Investments was provided by the Statewide Initiative Directors for the ten Strategic Priority Initiatives. Additional resources obtained by short-term grants are not included in this total.

EXAMPLES OF PARTNERSHIPS THAT PROVIDE RESOURCES TO COLLEGES

Centers for Applied Competitive Technologies (CACT)

Demonstration sites, funded through industry partnerships provide training resources for the colleges. The College of the Canyons CACT has 3,000 square feet in an existing corporation, with four classrooms and (very expensive) Computer Numeric Control (CNC) equipment donated for use as a training center. Full time credit courses are taught there day and night. Sierra College's partnerships with the electronics industry have developed computer repair and electronics laboratories. San Diego has a fully automated machine shop with an attached computer lab, electronics and automation laboratory a technology incubator, that have all been paid for and developed with industry partnerships and grants acquired by the CACT.

Applied Biological Technologies

The Central Coast Biotechnology Center is a clearinghouse for used industrial equipment and supplies from Amgen Inc., Baxter Hyland Immuno, Medical Analysis Systems and other companies and redistributes these for free to

colleges and high schools. The Center owns two kits that include five laboratory exercises in biotechnology. These kits are loaned to high school and community college instructors for classroom use, including PCR, DNA fingerprinting, bacterial transformation and two chromatography exercises. Approximately 3,000 uses of the kits occurred in a fiscal year in the region from San Luis Obispo to Los Angeles.

The Biotechnology Regional Centers and programs are all faculty driven. The faculty members are keen to offer this subject matter fostering the number one state in the union in biotechnology. The faculty benefit from the Biotechnology Centers' support for the required expensive equipment and the industry contacts. The Biotechnology Regional Centers created and supported biotechnology programs in 53 community colleges. The consortium of ten colleges in the Bay Area, the number one leading area in the United States for biotechnology, is funded by the Northern California Biotechnology Center. Colleges that have biotech programs depend on grant funds rather than the appropriated funds, as these programs are expensive in terms of equipment and consumables.

Through the Program's Biotechnologies Regional Centers, connections between colleges and the high schools' science and biotechnology are also created. For example, Richard Smith at Buena High School in Ventura is able to offer advanced placement biology to his students solely because he is able to borrow the expensive equipment available in the Biotechnology Training Kits of the Central Coast Biotechnology Center. Strong and active connections between colleges and high school science faculty members have been forged by each of the Program's six Biotechnology Regional Centers.

E. SHORT-TERM GRANTS: INDUSTRY-DRIVEN REGIONAL COLLABORATIVES AND JOB DEVELOPMENT INCENTIVE TRAINING FUND PROJECTS

In addition to the long-term infrastructure and Strategic Priority Initiative Areas, the Program funds two short-term grant categories, the Industry-Driven Regional Collaboratives (IDRC) and Job Development Incentive Training Fund (JDIF). These two categories are for flexible, local projects that enable local community colleges to meet workforce needs identified at the local and regional level. These projects have also contributed to the infrastructure of the colleges by building laboratories and demonstration sites, funding faculty in-service in industry, developing career pathways for students and providing outreach to economically distressed areas. These short-term grants are broadly defined to allow maximum local autonomy in developing projects responding to the needs of regional employers, employees, and labor. Although flexible in terms of the project types, the JDIF grants have prescriptive criteria in legislation to provide incentives to train and/or hire welfare recipients and the working

poor. These funds provide colleges with a program of incentives for employers who create entry-level positions either in their own company or through suppliers or prime customers (i.e., within the industry cluster). The expectation is that expenditure of these funds should lead to both the upgrading of highly skilled and technical workers, and the creation of new job opportunities for entrants into the workforce.

Over the last four years, the Program has received significant augmentations to its budget, primarily in the IDRC funding category. The applications have always exceeded the amount available. Only the highest scoring applications may receive funding. Many unique local needs are being addressed by these grants. The top ten subject areas receiving project funds over the last four years are listed in the table below.

TABLE 10

Short Term Grant Subject Areas IDRC and JDIF	Project Funding over four fiscal years FY 97-00
Manufacturing	$8,565,281
Information Technology	$7,212,197
Multimedia/Entertainment	$5,321,904
Business and Workforce Improvement	$4,204,070
Hospitality and Tourism	$3,755,060
Health Care	$3,379,426
Advanced Transportation Technology	$2,514,676
Workplace Learning	$1,765,814
Geographic Information Systems	$965,274
Small Business	$717,832

Because of the flexibility of the short-term projects, the stages of the development vary. Some projects are on the cutting edge of new technology, while other projects address an immediate need that insures that businesses keep jobs in the local area through a qualified workforce. A few project summaries that show the variety of projects that are funded through Job Development Incentive Training Fund (JDIF), and Industry-Driven Regional Collaborative (IDRC) grants follow. The three samples of IDRC grants, and three samples of JDIF grants are described on the next page.

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1. Sample Industry-Driven Regional Collaboratives Projects

Allan Hancock College Grant Number 00-150-003	College of the Canyons Grant Number 00-150-013	San Diego City College Grant Number 00-150-022
Hospitality and Tourism – Food Services	Student Outreach Programs for Manufacturing	Rapid Manufacturing Technologies for Product/Enterprise Development
The foodservice and hospitality industry in Santa Barbara County reported difficulty in finding qualified workers. Allan Hancock college designed a program for students and workers to obtain the necessary skills to succeed in the industry, with input from two county health departments, the national and state restaurant associations, and private industry. The college also works with several local high schools that offer culinary courses. The grant is helping to develop a state of the art kitchen for students to be trained in current industry needs. An advisory committee made up primarily of industry professionals uncovered not only the urgent need for management skills, but also a surprising deficiency in baking skills in the area. Thus the program is being tailored to meet specific local needs. Courses have been offered in Spanish as well as English, and the program also uses on-line courses and CD-ROM versions of the lectures to facilitate distance learning.	In the first year of a two-year project, this project is designed to increase the number of students entering the field of manufacturing technology. By leveraging resources through the grant, the college received a Computerized Numeric Control (CNC) lathe on a two-year consignment from Haas Automation, a $69,000 value. Eight companies partnered with the colleges to develop a CD-ROM on manufacturing careers. Twenty employers were served by this project and the college was able to host demonstration tours and cosponsored one conference. With the help of the partners, curriculum is being developed for the Center to give students the opportunity to explore a wide range of possible manufacturing careers using state-of-the-art technology that will provide real life, work-based experience.	The primary purpose of this project is to develop and deliver Rapid Prototyping/ Rapid Manufacturing (RP/RM) information and services to existing and emerging technology enterprises in the San Diego Region, while at the same time modernizing Community College manufacturing education programs to include instructional offerings in this critical technical skills area. A major success was achieved through this project when City College students won first place at the SME Small Manufacturing Challenge at WESTEC for their product development skill in designing, prototyping and fabricating a robotic gripper arm for a client company of the incubator. Through this project faculty and staff have received training in the use of RP/RM equipment.

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2. Sample Job Development Incentive Training Fund Projects

Santa Barbara City College
Grant Number 00-151-002

The development of 14 new courses transformed the program that will offer students the opportunity to master industry-response American Culinary Foundation competencies. The redesigned program allows students to enroll part-time, continue to work while they are learning and complete a degree rather than a certificate. Based upon the success of this program, a graduate of Santa Barbara City College's Culinary Program now has expertise so that she is teaching students how to prepare the recipes from the restaurant at which she was trained. The project provided training to 11 students and 12 employees. As a result of this project, 7 welfare recipients were hired. The training included courses in Advanced Pastry Arts, Internship in Hotel Management & Culinary, Culinary Fundamentals & Lab, Intro to Food Service Industry and Intro to Food Theory & Table Service.

City College of San Francisco
Grant Number 00-151-003

The apparel and soft goods manufacturing industry is the second largest manufacturing industry in California. Small and medium sized manufactures are unable to pay cash for training, but because of an expansion and a more highly skilled workforce, this industry is able to offer entry-level positions to welfare recipients. Anchor Group International produces its own private label line of clothing, but also does large production for Tommy Hilfinger, GAP and Bebe. As the result of a site visit to Anchor Group International, a training proposal for the Quality Control area and raw material inspection was drafted and training was delivered to 12 staffers. Anchor Group provided placement in their firm for 10 welfare/working poor recipients. The project provided training to 13 faculty, 83 students and 9 employees. The project included training in CAD/CAM apparel and blueprint/drafting and CAD/CAM construction trades.

Sierra College
Grant Number 00-151-011

This project was designed to provide customized training and industry-driven curriculum development that focused on upgrading skills and alternative delivery methods. The creation of a mobile training lab assisted those employers who were too far away or unavailable for regularly scheduled campus-based classes. Customized curriculum in beginning, intermediate and advanced electronics soldering, resulted in measurable powerful performances that impacted the "bottom line" of participating companies. 128 employees were trained and 10 welfare recipients were hired.

F. CONTRACT EDUCATION – A DELIVERY SYSTEM FOR ECONOMIC DEVELOPMENT PROJECTS

Contract Education is a delivery system whereby community college districts engage private industry to pay directly for training services such as academic assessment, training material development, performance needs analysis, job profiling, counseling, job placement and other consulting services. In 1999-2000, $29 million was generated through community college's contract education services in California. Of this amount $8.2 million was through fee-based/professional development services and $5 million in apportionment funding for credit classes.

The Program funds performance-improvement training to enhance colleges' ability to improve contract education services.

Approximately 78 colleges offer contract education services, the statewide results from all categories are reported separately, and are not reported by the grantees unless there is a direct result from an Economic Development Program funded grant. Economic Development Projects are supplemented with this fee-based service. Often funded grant projects develop courses and curriculum that provide opportunities for colleges to serve employers and employees on a fee basis. In the Program's "Project Data Summary Form" that each grantee submits as part of their annual report, the project directors are asked to describe the contract education courses, along with other activities that resulted directly from the grant. The Program's Highlights, presented at the beginning of this document, show the number of contract education courses that were jump started with Program funds this year. Table 11 below provides a sample list of these courses that benefit incumbent workers:

TABLE 11 Sample of new courses developed and offered through Contract Education as a result of Economic Development Grants in FY 2000-2001 reported by project directors

English as a Second Language (ESL) for Child Care Workers	Child Development
Basic and Advanced Electronic Theory	Supervision
Vocational ESL Training Program (RTI Electronics)	Clinical Microbiology Practicum
Programmable Logic Controllers – An Introduction	Clinical Hematology
Seiko Robotic Maintenance	Lean Manufacturing
Blueprint Reading and Geometric Dimensioning & Tolerance	A+ Essentials
Lean Manufacturing Principles	Unix System Administration
Management Training	Introduction to Electric and Hybrid Vehicles
24 Hr. Hazardous Waste Operations (HAZWOPER)	Automotive Electronics
California Compliance School	Clean Air Car Course
DTSC Train-the Trainer	Fuel, Electrical and Emission systems
Standardized Emergency Management System	Geographical Information Systems/ Transportation Information Technology

CALIFORNIA COMMUNITY COLLEGES ECONOMIC DEVELOPMENT PROGRAM

Benefits: Outputs and Outcomes

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Benefits: Outputs and Outcomes

IV

A. Support For Innovative Curriculum Development

In previous Government Code, as well as current Education Code (section 88531), Economic Development Program funds have allowed for supporting curriculum development, development of instructional packages, faculty mentorships, faculty and staff development, performance-based training, credit and noncredit programs and acquisition of equipment. The Program has been supporting the development of curricula, offering for-credit and not-for credit courses and training faculty for 12 years. The efforts have, and continue to make a substantial contribution to the community colleges' instructional programs. Many projects start out as short-term training or certificate programs and are later brought into the college's curriculum through the curriculum approval process.

In recognition that some projects may become institutionalized, future plans include developing the ability to track courses developed and or supported by Economic Development Program. Also, because projects may become part of the curriculum, the Request for Applications, the document that provides directions for grant applications, now include a requirement in their project management plan to involve their academic senate so that the approval process is imbedded in the nature of the project from its inception.

If the nature of this project includes activities such as curriculum development, staff development, or other academic or professional matters that should include the local or state academic senates, describe what the activities are and how the senate was involved in the planning of and application for this project.

The emphasis of the Initiatives and Regional Centers has evolved over time, and efforts in eligible activities that support curriculum, program development and performance-based training have grown. These activities insure that workforce training keeps up with the regional economies of the state, helping to create and retain jobs, grow new industries and develop career pathways.

Many instructional program related activities would not have been developed without the Program for the 2000-2001 Fiscal Year. From the annual reporting requirements, project directors report that they are able to pursue and deliver innovative curriculum to students and incumbent workers. The Project Data Summary Form captures information on courses that were supported by Economic Development Program grants. Just over 200 grants have resulted in the following accomplishments in curriculum and training reported by grantees for 2000-2001:

- 499 New courses developed/offered
- 307 Courses developed – to be offered
- 15,458 Students in credit courses
- 14,474 Students in non-credit courses
- 323 New contract education courses offered as a result of the grant

Economic Development Program projects work with their college and local businesses to update curriculum and provide instructional resources. In many ways, these projects provide "pilot" opportunities that advance curriculum. This requires the project staff to work directly with current programs. For example, each of the six Biotechnologies Center directors created curriculum for and/or teaches biotechnology courses. Other Regional Centers have helped introduce courses from pilot projects, infused new resources and provided faculty additional training.

Through the Economic Development Program, faculty is trained, curriculum is developed, and industry donations are gathered and distributed. The foundation is laid to support the emergence or transformation of industry clusters that extend beyond any one district. Samples of the courses shown in the table below, followed by detailed examples, illustrate the extent and range of support for the classroom.

The Program's 105 Regional Centers also provide direct services to students. New college programs in geographic information systems, multimedia, environmental technologies and biotechnologies were all jump-started through the economic development program. Students are getting well paying jobs through credit courses as a result of the Initiatives and Regional Centers. For example, the Regional Environmental Business and Resource Assistance Centers (REBRAC) have been instrumental in training an average of 4,000 students per year, since 1993, who are seeking degrees. This type of instruction for students gets results. The REBRAC at Allan Hancock College has nearly a 100% placement rate – each student studying hazardous materials training has a job waiting for them when they finish. The REBRACs developed an environmental technology curriculum series with 13 texts and 28 videos and their statewide video course, "Preserving the Legacy," has been featured on PBS.

TABLE 12 Sample Of Credit And Non-credit Courses Developed And Offered – Fy 2000-2001

Fiber Optics Introduction	Doing Business In Mexico
How to Establish a Small Business	Acute Care Nursing Assistant
Internet for Business Opportunities	Optical Fabrication 2-lab
Innovative Business Series	Drawings, Specifications & Print Reading
Marketing Small Business	Coronary Care Nursing
Relationship Mgmt. in the Workplace	Critical Respiratory Nursing
CATIA I (Computer Assisted Design software)	Intro to Respiratory Therapy
International Payments and Collections	Hemodynamic Monitoring
International Transportation	Introduction to Tech Communication

TABLE 13 Sample Of Credit And Non-credit Courses That Were Developed (To Be Offered) – Fy 2000-2001

CAD Release 2000i	Motion Graphics II
Designing and Implementing a Data Warehouse Using SQL Server	Automotive Service Excellence Certificate Prep A-3
GIS and Environmental Technology	3-D Animation I
Visual Basic and Database Management for GIS	Web Server Maintenance and Security
Crime Mapping and Analysis	Building an E-Commerce Storefront
Advanced Nursing	Basic Linux
Virtual Reality Simulations-Intermediate	Setting Up an Internet Business
Authoring Tools for New Media I	Principles of Mammography & Procedures
Motion Graphics I	Medical/Surgery Nursing-Online

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IV BENEFITS: OUTPUTS AND OUTCOMES

Examples of Innovative Curriculum and Faculty Training

In many cases dedicated professionals combined Economic Development Program projects with other resources to foster collaboration among colleges in a region to develop and promote programs. Curriculum, programs and information resources are shared among colleges. There are many examples where the benefits of a project reach beyond the host college district's boundaries. A few examples follow:

Manufacturing – Rapid Prototyping, Robotics, GIS

An outgrowth of the Centers for Applied Competitive Technologies (CACTs) efforts are training in Rapid Prototyping that is now taught in three colleges programs. Rapid Prototyping is a state of the art engineering methodology to use computer graphics and modeling techniques to design products. Robots that were donated to the CACTs are now in over 20 automation programs in colleges and high schools. Donated lasers have upgraded or created new photonics courses and programs.

For three years, starting in 1996, economic development grants where used to write the first GIS (Geographic Information Systems) curricula in a community college and then to train faculty for classroom instruction. Over this period, under the CACT banner of 'technology," there were 127 full and part time faculty trained in the use and methodology of GIS. Business partners donated over $140,000 of software to 52 campuses. GIS would not be a significant technology in the community colleges today were it not for Economic Development Program grants and CACTs.

Advanced Transportation – Fuel Cell Curriculum

The Advanced Transportation Technologies Center at the College of the Desert has developed programs in partnership with both the National Science Foundation and the private sector to provide fuel cell curriculum and training modules to colleges.

Applied Biotechnologies – Developing Programs

The Director of the San Joaquin Biotechnology Center (SJBC) at Bakersfield College created and teaches a biotechnology training program at Bakersfield College and has made contacts with community college faculty at the 14 colleges in their region. The Center's advisory committee includes three industry representatives, local economic development agencies and the county agricultural commissioner. The Center's results include the College of the Sequoias' new plan for a one-year lab technician training program for welfare to work. Also, as the result of Center activities, Merced and Fresno City College recently added biotechnology programs.

New Media/Multimedia/ Entertainment – Model Curricula

New Media/Multimedia/Entertainment Centers have developed model regional curricula for Multimedia instruction that allows consistency for students transferring between regional community colleges. This has resulted in the first conjoint multimedia program application to Chancellor's Office involving Moorpark, Oxnard and Ventura Colleges.

Health Occupations – Nursing Recruitment, Model CAN Curriculum, Online Training

In Santa Barbara, the Regional Health Occupations Resource Centers (RHORC) work with industry and community colleges to develop a recruiting program for nursing students. Industry partners and the RHORC combine resources and funded a position to develop a recruiting program. If piloted activities are effective, the RHORC will bring this program to the Statewide Health Occupations Advisory Committee and the Health Care Delivery Initiative for dissemination throughout the State to address the nursing shortage.

The RHORC's have developed several useful model curricula, including: Certified Nurse Assistant, Medical Laboratory Technician, Critical Care Nursing, Acute Care Nursing, the Medical Interpreter, and the In-Home Support Worker curriculum. The Medical Lab Tech Program is being exported from Hartnell to City College of San Francisco. Their initial activities resulted in a model curriculum for the Certified Nursing Assistant that was approved by the Department of Health Services and then available at the cost of duplication to community college, facility-based and regional occupation programs in secondary schools.

Faculty Training – Environmental Technology

The Faculty Associates in Science and Technology (FAST) project is designed to develop a Leadership Corps of community college faculty who can design state-of-the-art Environmental Technology programs. Four phases of this program are defined in the project and include providing environmental technology faculty with real world experiences that translate into improved community college curricula. The development of a nationwide network of experienced professional educators called FAST Leadership Corps, to serve as a resource to other community college faculty delivering environmental programs. The FAST Project has had four successful years of faculty internships and accounts for more that 80 faculty trained.

B. Outreach – Economic Distress, Underserved, And Working Poor

AB 2794 (Havice, 2000) added new requirements to the Economic Development Program including support to colleges serving economically distressed areas, and requirements to help colleges obtain grants that have not been competitive in the past. In 2000-2001, the Program set aside pilot projects to help build capacity at colleges that have not been competitive for funds (also known as "underserved"). Staff also conducted outreach efforts to insure that colleges that serve economically distressed areas would receive technical assistance. To address requirements in Education Code Section 88510(c)(4), one of the set-aside grants was for capacity development for "underserved" eligible colleges. These colleges were defined as those that had received two or fewer Economic Development Program grants in the last four years. To address the economically distressed areas, the Program used a pilot methodology based on the US Economic Development Administration's grant criteria which is a combination of unemployment rate and per capita income.

An analysis of the results of the 2001-2002 competition shows that while two areas of concern were directly marketed to, the impact on the applicants was to broaden their interest in the Economic Development Program. Approximately 50% of the total competitive funds went to distressed or capacity development eligible colleges. The colleges that were designated as underserved, and/or serving areas of economic distress successfully competed for more than just the targeted, set-aside grants. Below is a summary of the results of the 2001-2002 competition for grant funding:

- $12.2 million was available for both new short-term grants and Regional Centers. $6.4 million went to 36 different colleges that were either in economically distressed areas, or receiving two or fewer grants in the last four fiscal years.
- $8 million was available for competition for short-term grants. Approximately $4.1 million went to 27 separate districts/colleges that were identified as receiving two or fewer grants in the last four fiscal years.
- $2.6 million was available for Job Development Incentive Training Fund (JDIF) grants that included the new "working poor" definition. Of the $2.6 million, $1.2 million in JDIF projects were awarded to colleges in economically distressed areas.
- $1.4 million of the Industry Driven Regional Collaborative funds were set-aside for economically distressed areas. An additional $1 million in center projects was awarded to colleges in economically distressed areas.

Note: Because short-term grants can be up to two years and Regional Centers compete on a five-year cycle, funds available for competition range from $10-17 million depending on the fiscal year, and allocations in the state budget.

C. CAPACITY DEVELOPMENT AND MARKETING

1. Marketing

The Program conducts marketing efforts on various levels. It is described as the key linkage to employers as part of the agency-wide campaign, "California Community Colleges. The Way California Works." The Program funds a Central Coordinating Network (CCN) Project that markets the Program internally to the system's constituency groups and externally to other providers and to businesses. Newsletters, websites, an "800" number and an Annual Conference are all part of the CCN's state level marketing effort. The Coordination Network has published three newsletters including:

(a) "Connections." Designed for external audiences, legislators and business people. It highlights economic development achievements of the colleges, and has distribution of approximately 4,000.

(b) "President's Page." Designed for college presidents of academic senates and college/district CEO's, this publication highlighted benefits of the Program to colleges in community and economic development. It was distributed to all 108 colleges.

(c) "College Connections." Designed for full-time faculty of the CA community colleges. It highlighted curriculum achievements and connections to businesses. The distribution was approximately 18,000.

Also, the ten Strategic Priority Initiative Areas have websites as do contract education, the Centers of Excellence, the Professional Development Initiative and the seven regional consortia. The Program also funds eight regional marketing grants at a total of $350,000 so that regional networking and themes are supported. The Regional Marketing grants disseminate materials and markets workforce and community college economic development programs to businesses. Employers in regions, as well as incumbent workers and students are able to find out what regional education and training programs are available. The capacity building programs described below all have marketing components as well.

2. Capacity Building

(a) Community College Chancellor's Office – Program Unit

The Economic Development Program's Chancellor's Office professional staff provide technical assistance and ensure quality and compliance of the projects and the initiative. Program staff is in constant contact with community college representatives to provide information and technical assistance. For example, staff contacted each of the colleges eligible for the set aside grants for economic distress and capacity development to insure that these institutions were aware of these opportunities. To keep in contact with the college representatives, Program staff attends regional consortia meetings, posts and distributes monthly reports, conducts bidder's workshops, and provides one-on-one technical assistance. Program policy is carried out by the Program Unit's staff.

(b) Strategic Priority Leadership, Coordination & Technical Assistance

The Strategic Priority Leadership, Coordination & Technical Assistance program builds economic development capacity within community college, and coordinates community college economical development resources to most effectively deliver services. This category includes ten statewide leadership positions that assist the Initiative areas, two contract education leadership positions, a Professional Development Institute, Centers of Excellence, as well as a Central Coordination Network.

Each of the leadership positions is responsible for:

(1) Disseminating information and providing technical assistance to community college-based Economic Development Program Regional Centers and funded projects in their Initiatives.

(2) Providing technical assistance to colleges.

(3) Supporting the operation of statewide committees, and

(4) Assisting community colleges to regionalize their economic development programs.

Directors also assisted in the formation and operation of initiative-specific strategic partnerships between employers and community colleges, and acted as liaisons/coordinators between economic development Initiatives and federal or state agencies.

(c) Central Coordination Network (CCN)

The core activities engaged in by the CCN are holding conferences and training sessions. The CCN primarily provided technical assistance related to expanding the reach of economic development programs to community colleges throughout the state. The CCN provides operational, technical, logistical, and marketing support to the Chancellor's Office. The Coordination Network develops statewide partnerships, coordinates resources and sponsors special projects. It maintains a toll-free telephone answering service that provides businesses with a single point of access to all community college economic development services. The CCN also supports the Program's Executive Committee (now called the Economic Development Program's Advisory Committee). The CCN assists the Initiative Directors, and community college based economic development organizations. The CCN is located at Los Rios Community College District.

(d) Business & Workforce Improvement Initiative/Centers for Excellence

The Centers for Excellence promotes regional coordination of economic development resources, and the creation of contract education centers at community colleges throughout California. It supports existing contract education centers with technical assistance on how to market economic development services to the business community, and act as a liaison between colleges and employers, entering into strategic partnerships with various organizations. Centers of Excellence provide workplace assessments and in-service training to businesses. The Centers for Excellence operated at nine community college locations during FY 1999-2000.

(e) Business & Workforce Improvement Initiative/Professional Development Institute

The Professional Development Institute (PDI) gives technical assistance on how to build leadership and organizational capability to community colleges that want to establish and operate quality economic development services and programs. The PDI delivers staff training and disseminates information about best practices to community colleges operating contract education programs. The primary services provided to community colleges by the Professional Development Institutes are information dissemination, program improvement and regional coordination and assistance.

(f) Regional Consortia

Regional Business Resource Assistance & Innovation Networks, also called the Regional Consortia, create partnerships among community colleges to market their economic development programs to employers. This effort is jointly funded with vocational education funds. Community colleges are organized into ten regional groups, and several of these groups have combined to meet as seven Regional Consortia. The seven consortia provide networking opportunities for colleges in the regions. The program provides in-service training to community college faculty and staff and assists in creating regional economic development plans that integrate academic and occupational curriculum at both community college and district levels.

(g) Regional Workforce Preparation and Economic Development ACT (RWPEDA) Pilot Projects

The 2000-2001 fiscal year was the third and final year the Economic Development Program and three other State agencies involved with economic and workforce development provided funding for regional collaborative pilot projects required by the Regional Workforce Preparation and Economic Development Act AB 1542 and SB 1744. The purpose of the Act was to link economic development, education and workforce preparation in a major step toward the creation of a statewide collaborative workforce development system.

One of the requirements of the Act was the development of a Memorandum of Understanding (MOU) forming a partnership among four state officials that have workforce development responsibilities: 1) The Chancellor of the California Community Colleges; 2) the Secretary of the Technology, Trade and Commerce Agency; 3) the State Superintendent of Public Instruction; and 4) the Secretary of Health and Human Services Agency. A second requirement of the Act was the creation of an integrated workforce development plan that would serve as a policy framework for California's economic growth. The plan is entitled California Workforce Development: A Policy for Economic Growth.

Economic Development Program funds were used for six local pilot projects. This complied with the third and last requirement of the Act. The state partners were required to identify five million dollars ($5,000,000) per year, for each of three years for distribution to a minimum of five regional collaboratives, in order to create systemic change that results in increased collaboration and service delivery within each region. The Economic Development Program provided funding as follows:

1998-1999	$500,000
1999-2000	$1,000,000
2000-2001	$1,000,000

A description of the "pilot" project in Los Angeles at Rio Hondo College follows.

Rio Hondo College: RWPEDA

The main objectives of the Los Angeles County project was skills gaps profiling, and developing an Internet Search Engine to serve all of Los Angeles County. The products developed were intended to serve the needs of business partners with Los Angeles County. Local matching funds of $220,927 were provided. The workforce skills gap profiling process identified gaps between labor market needs and available education and training curriculum. The profiles completed include: Metal Work Industry, Food Industry, Apparel Industry and Industry related to Prop 36 - Drug and Alcohol Abuse. In addition, the Web Portal "laworkforce.org" was designed and marketed to assist individuals seeking a new job, or skills enhancement related to a current job in Los Angeles County. The Web Portal has now been migrated to the server hosted at Rio Hondo College. The college will host this portal for the next three years.

D. EMPLOYER ASSISTANCE

Employers and industry groups are provided a variety of services by the Program. These services include one-on-one counseling, assessments, demonstrations and in-depth technical assistance. Most of these services are provided by the Regional Centers, and each Strategic Priority Initiative offers services unique to its subject area. For example, the Workplace Learning Resource Centers provide assessments, and learning laboratories, the Centers for Applied Competitive Technologies have manufacturing demonstration sites, and the Centers for International Trade and Small Business Development Centers provide one-on-one counseling.

From the Project Data Summary Forms submitted by each grant, we are able to gather information on number of businesses served, employees served, job placements, and the amount of funding matched directly from business and industry. Also, for the Job Development Incentive Training Fund grants, projects report the number of welfare recipients hired. This information can be summarized as follows.

- 56,743 businesses served
- 93,667 employees served
- 7,056 job placements were reported by funded projects, of these, 50 welfare recipients were reported hired by 11 JDIF grants
- $28 million from industry/business. This made up a significant portion, more than half, of the required match for funded projects.

IV BENEFITS: OUTPUTS AND OUTCOMES

The tables on this page contain data from the on-line data collection system that reflect employer services. The first table lists all ten Initiatives, and the numbers of incumbent workers and numbers of business served. However, five of the ten Strategic Initiatives provide the majority of the in-depth services to businesses that the Program offers. The second table focuses on these five Initiatives that include the Workplace Learning Resource Centers, the Small Business Development Centers, Centers for Applied Competitive Technologies, Centers for International Trade and Regional Environmental Business Resource Centers. The report forms for the on-line data collection system are customized to the services that Regional Centers provide. For example, the Centers for International Trade and the Small Business Development Centers report new and ongoing clients that receive one one-on-one counseling; the Regional Environmental Business Resources Centers report on environmental audits, and regulatory compliance; and the Workplace Learning Resource Centers report on learning laboratories. The numbers reflected in the second table are for services primarily for employers. These service delivery oriented Regional Centers are responsible for the majority of the EIN numbers used in the external impact study, and so provide the economic impact results.

TABLE 14 Strategic Initiatives Regional Centers

	Number Incumbent Workers Served	Number of Businesses
Small Business Development Centers	10,773	25,584
Centers for Applied Competitive Technologies	13,247	9,554
Centers for International Trade		8,371
Advanced Transportation Technologies Centers	1,250	5,778
Regional Health Occupations Resource Centers	6,889	5,156
New Media/Multimedia/Entertainment	537	2,343
Regional Environmental Resource Centers	4,243	2,311
Workplace Learning Resource Centers	3,732	2,227
Biotechnologies Centers	634	543
Total	41,305	61,867

TABLE 15 Employer Services – Service Delivery Initiatives

Workplace Learning Resource Centers
Small Business Development Centers
Centers For Applied Competitive Technologies
Centers For International Trade Development
Regional Environmental Business Resource Centers

	Number Participants	Participants per Center	Number Hours	Hours per Center
One-on-one Counseling/New	17,336	996	305,560	17,069
One-on-one/Ongoing Clients	2,486	166	12,137	809
Regulatory Compliance	1,373	229	8,138	1,356
Environmental Audits	62	10	4,221	704
Organizations Assessments	5,340	445	12,070	1,006
Assessments	2,632	202	5,484	422
Technical Assistance	1,422	109	6,260	482
Specialized Technical Assistance	287	48	1,768	295
Tech-Default	30	5	544	91
Learning Laboratories	1,054	88	8,614	718
Demonstrations	1,714	132	2,568	198
Information Services	15,709	1,170	214,794	17,300

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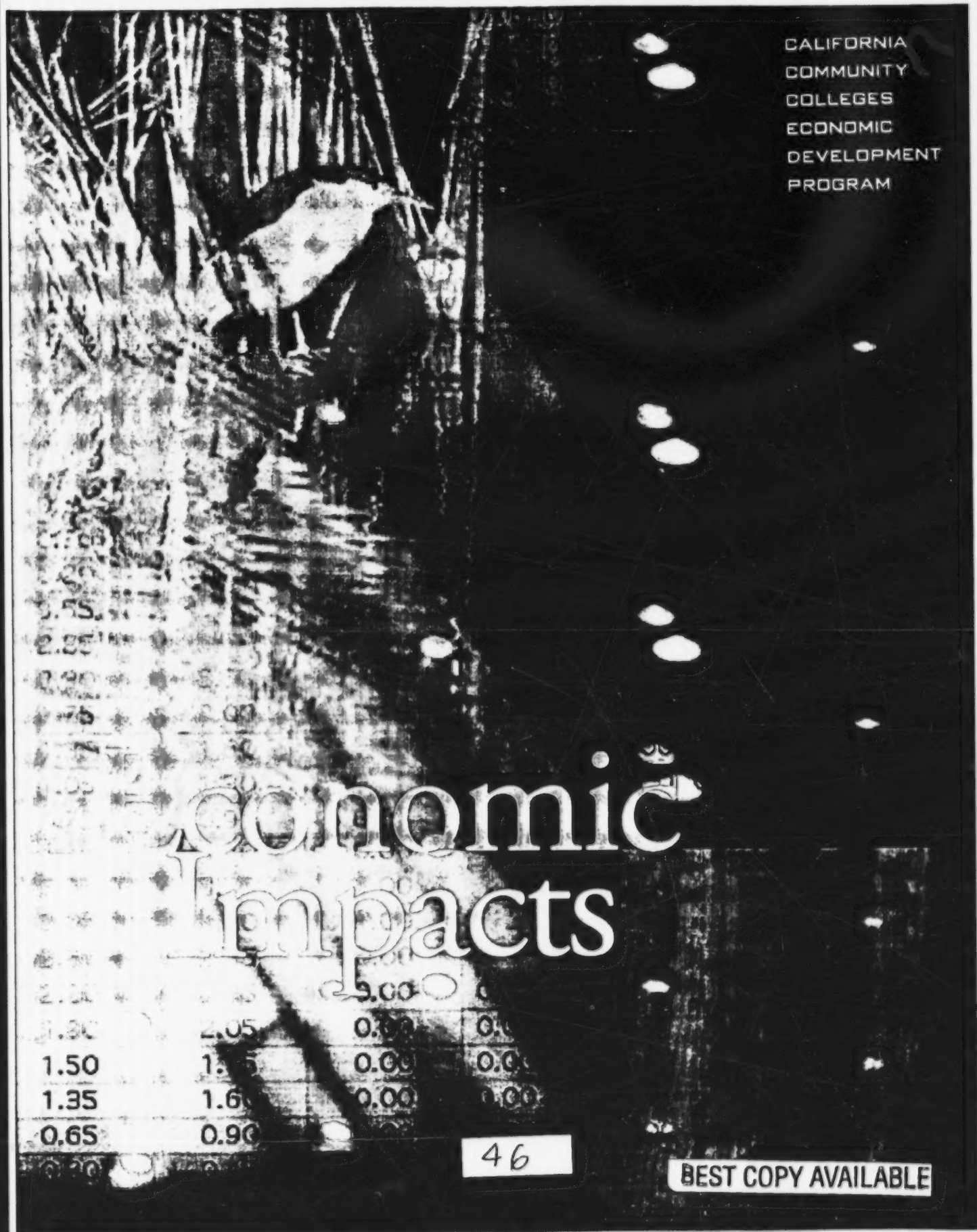
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Economic Impact

External Study and On-line Reporting System Information

Using an external economic impact study, the productivity of the Economic Development Program (Program) over the last three years has been described by the research consultant as consistently impressive. This study, also called a "summative evaluation," uses methodology developed in cooperation with the Legislative Analysts Office and the Department of Finance and is in its third year. To calculate the economic impacts, the summative evaluation uses employer data from the Franchise Tax Board and the Employment Development Department. The employer data is obtained by using the Employer Identification Numbers from companies that received in-depth technical assistance. This externally validated information is supplemented below with data from the on-line reporting system on services to employers that include: counseling, audits and regulatory assistance, assessments, technical assistance and learning laboratories. (A separate economic impact report for 2000-2001 is also available).

TABLE 16

FY 2000-2001 Economic Impact Study – Wage Data for 1998-2000

Economic Development Program Assisted Companies	Mean Wage received per worker	$44,661	Median Wage received per worker	$35,380
Not Assisted by Economic Development Program	Mean Wage received per worker	$37,421	Median Wage received per worker	$29,531

TABLE 17

2000-2001 Economic Impact Data

Value of New Jobs Created	Wage and Salary Income Created (direct)	Wage and Salary Income Created (indirect)
$361 million	$212 million	$148 million

TABLE 18

2000-2001 Economic Impact Data

Return on Investment[1]	Benefit to Cost Ratio[2]
This figure represents only the return in state taxes paid by both workers and businesses for each dollar invested from the Program.	This figure represents the dollar values of the program benefits divided by the program costs, i.e., each Program dollar spent returns $12 back in benefits.
$2.64 - $3.05	12:1

TABLE 19

FY 2000-2001 On-line Reporting System

One-on-One Counseling:		Environmental Audits and Regulatory Compliance:	Assessments:	Technical Assistance:	Learning Laboratories:
New Clients	Ongoing Clients	Number of Businesses	Number of Businesses	Number of Businesses	Number of Businesses
17,336	13,540	8,740	7,972	1,709	1,054

[1] ROI is in constant dollars, using the base year 2000 to compare values across years.
[2] Benefits include the changes in profits, and the differential of the wage increases. The costs are the Program expenditures.

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Program Legislation

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The Program's Legislation

VI

Economic development was added as a primary mission of the California Community Colleges Education Code by the state legislature in the statutes of 1996 (SB 1809 Polanco, statutes of 1996).[24] The Program has been in existence for 20 years, initially established in 1982 by Executive Order. The Community Colleges Economic Development Program's mission was established in legislation by AB 1497 (Polanco) in 1991. AB 2794 (Havice, 2000) reestablished the Program's mission, moving all enabling code from the *Government Code* to *Education Code*. See appendices, the legislation section, for text of current (Havice, 2000) and proposed (Polanco SB1566) statute.

After the budget augmentation of 1997 – 98 and following a broader program review, requirements were added so that the Program would report on its economic impact, and track new information on courses and students. Annual reports for FY 98 – 99 and FY 99 – 00 were designed to show the economic productivity of the program and in developing courses and curriculum to meet the needs of a changing economy. This changed projects' objectives, reporting and evaluation. Funds from the budget augmentation by the legislature in FY 97-98 were used to create short-term project vehicles, and to develop several new initiatives, as well as to add Regional Centers to existing initiatives. This resulted in nearly doubling the network of Centers, from 54 to 101.[25] Centers act as the delivery system for the ten Strategic Priority Initiatives, leveraging resources and implementing new strategies. The majority of the Centers emphasize college capacity building and workforce development. The new Initiatives such as those in New Media/Multimedia/ Entertainment, Advanced Transportation, Biotechnologies and Environmental Technologies had their beginnings in the academic system and emphasize curriculum development and articulation to four-year institutions. The addition of the new Initiatives in biotechnologies and multimedia caused a major change in the objectives of the majority of what Centers do. For example, the Biotechnologies Centers have worked closely with businesses like Genentech and Amgen to develop new curriculum for lab technicians in bio-manufacturing. Because this is an emerging field, many postgraduates attend these new courses to get lab experience. In earlier years, Small Business, Manufacturing and International Trade were the key Initiatives and had a business development focus. The Program now has a balanced and diverse customer base.

AB 2794 (Havice, 2000) established new requirements and definitions effective January 1, 2001. The new requirements included reaching out to colleges that have not been awarded grants as well as serving economically distressed areas. The Economic Development Program Advisory Committee, established in legislation, embraced the new requirements, and improved and refined staff recommendations for pilot definitions and methodologies. The Board of Governors was then advised how to incorporate the new requirements and provide marketing and outreach so that colleges would be aware of the opportunities for funding economic development projects such as workforce training. The Board approved the new methodologies to meet the requirements.

The Program's new, proposed legislation, SB 1566 (Polanco), emphasizes workforce training and benefits to colleges, student and faculty. The legislation would also change the Program's name to the Economic and Workforce Development Program, and sections of the current law that now read "business and industry" will be changed to "employer and employee." The new legislation reflects how center objectives have changed. For example, if SB 1566 is passed in its current for, our reporting section 88550 of the *Education Code* will be amended to read as follows:

> 88550. (a) The chancellor shall implement accountability measures that provide the Governor, Legislature and general public with accountability measurements of the program that quantify both employer and student outcomes and seek to specifically isolate the impact of the ED>Net program on participants.

[24] *See attached Economic Development Program Chronology for significant legislation and budget changes.*

[25] *In 1999, the Governor added funds for California Mexico Trade Centers, which added new requirements for the Centers for International Trade and four new centers, bringing the center total to 105.*

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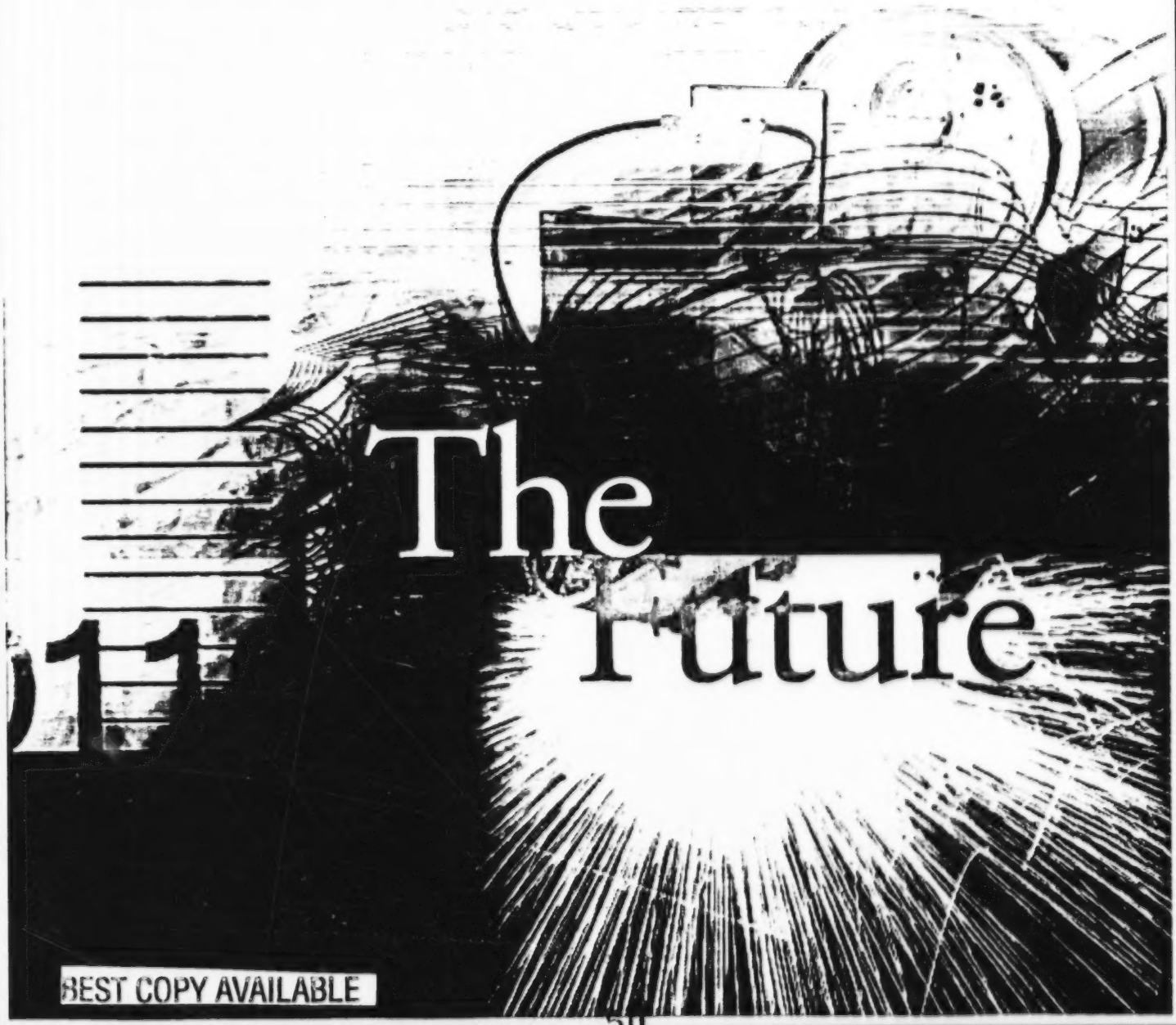

The Future

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The Future

VII A THE FUTURE: CHALLENGES, THE GOVERNOR'S WORKFORCE INITIATIVE, AND THE BOARD OF GOVERNOR'S INITIATIVE

Challenges: *By Dr. Gus Koebler, Executive Director of the Coordination Network for the Economic Development Program*

Today, California is competing in a global economy. In fact it is the fifth largest economy in the world.[26] It has also become a highly diverse economy, one that is less dependent on a single industry such as defense for its economic health. Each of the state's regional and are for the most part diverse economies, driven by industry clusters that are competing with other regional industry clusters across the nation and around the world. In all cases, they are competing nationally and globally on the basis of their industry cluster's capacity to simultaneously innovate new products and improve productivity.[27]

Science and technology has provided the underpinnings for "California's leadership in agriculture, aerospace and defense, computers, software, motion picture production, multimedia entertainment, biotechnology, medical devices, environmental technologies and telecommunications."[28] The application of high technology to traditional low-tech areas such as construction, apparel and furniture manufacturing are also producing a competitive edge. In California in 1999, 9.3 percent of all jobs are in high-technology industries, far above the national average of 5.6 percent. Average annual wages in high-technology industries are over $60,000, roughly double average pay in all private, non-farm industries. In 2000, California captured 21.6 percent of all US high tech manufacturing jobs and 17.6 percent of US computer service jobs.[29] Research and development sustain these industries and here again California leads the nation, with 20 percent of the nation's R&D compared to 12 percent of the U.S. population and 13 percent of the U.S. Gross Domestic Product.[30] While small businesses led the state out of the recent recession, it is the development and application of new technologies by small rapidly growing companies called "gazelles" that made the biggest contribution.

A global economy "is an economy with the capacity to work as a unit in real time on a planetary scale.[31] Bill Gates contends that: "If the 1980s were about quality and the 1990s were about reengineering, then the 2000s well be about velocity. ...[W]hen the increase in velocity of business is great enough, the very nature of business changes."[32] Successful global competition requires a region to continuously develop and adapt its resources to support the competitive advantage of all of its industry clusters and businesses of whatever size. This flexible support of innovation, technology development and deployment, multiple sector businesses growth and maintenance of a rapid pace of continuously updated workforce preparation across all skill levels and across all industry clusters is critical for maintaining and growing a diverse and resilient economy. For example, population serving industry sectors-construction, retail trade, finance, business services, health services-often offer well paying jobs and are where the greatest job growth is expected to occur. These sectors too are experiencing substantial changes in innovation and adoption of new technologies.[33]

Several global and US regional patterns of development could erode California's long-term growth strategy.

- Converging relative competitive advantage of labor and industry capabilities of high-tech regions.
- Increased innovation at both the basic science and applied levels in other countries such as Mexico and China where US trained engineers are returning in greater numbers than ever to start-up their own firms.[34]
- Faster technology churn forcing supply chain manufactures to invest more in information technology and other factors that contribute to their competitiveness.
- Extensive adoption of Information and Communications technology as a requirement to participate in high-technology manufacturing such as Aerospace and other traditional lower-tech areas such as apparel manufacturing.
- The development of regional independence and of a global perspective by multinational corporations such Boeing where they will use new forms of business networking, global procurement and distribution systems to obtain the best product at the lowest price.
- Emergence of international organizations such as the World Trade Organization and new forms of regional cross border trade cooperation that will change the way manufacturing and other activities are carried out. We see this along the border between California and Mexico with the emergence of cross border manufacturing networks.

These issues boil down to two basic challenges for workforce development and business competitiveness: first, as worker skills become more integral to boosting productivity growth, not only must these skills be upgraded quickly, but companies are demanding workers with higher skill levels to remain competitive. Second, workers can expect to move through multiple occupations require continuous just-in-time learning to stay employed as they move from job to job. Up to a third of all jobs are either being eliminated or just coming into existence. This also means that because companies can retain less of their investment in trained workers (the worker moves on or they become quickly outmoded) they invest less in training. As a share of GDP, all business investment in training fell 18 percent between 1988 and 1999.[35]

Small firms, in particular, given the current competitive environment, cannot afford to train their workforce even though, as noted, they make a substantial contribution to new job generation. This applies to gazelles too, who cannot pay for the necessary business consultation, production layout and other key advise. All small firms have problems updating their business practices, obtaining new technology, improving manufacturing processes, or engaging in international trade.

Today, California is not well positioned to maintain its competitive advantage in either workforce training or small business development in the long run.

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[30] *California Trade and Commerce Agency http://134.186.44.154/cersi/cwe/GSP.html*
[31] *International Monetary Fund, World Economic Outlook, The Information Technology Revolution," International Monetary Fund, October 2002.*
[32] *California Council on Science and Technology, California Report on the Environment for Science and Technology, CCST, November 1999, p. 3.*
[33] *Steven Levey, "Shared Prosperity and the California Economy," Center for Continuing Study of the California Economy, 2000?*
[34] *Ibid., p. 1.*
[35] *Manuel Castells, The Information Age Economy, Society and Culture: Volume 1. The Rise of the Network Society (Malden, Mass.: Blackwell Publishers, 1996), p. 92.*
[36] *Bill Gates, Business@The Speed of Thought: Using a Digital Nervous System. (New York: Warner Books, 1999), p. xii.*
[37] *Center for the Continuing Study of the Economy, "California Economic Growth-2001 Edition".*
[38] *Anna Lee Saxenian, "Silicon Valley's New Immigrant High-Growth Entrepreneurs," Economic Development Quarterly, Vol. 16, 1 (February, 2002).*
[39] *Progressive Policy Institute, "Building Skills for the New Economy," Policy Report, April 2001.*

VII THE FUTURE

- California is not producing sufficient skilled labor to meet high-technology industry demand for the foreseeable future. There were 14,000 unfilled science and technology related jobs in 1999.[36]
- By the year 2000, 65 percent of new jobs required postsecondary education and training beyond high school, but below the baccalaureate level.
- The aging baby boomers are resulting in an aging workforce with out of date skills and the next generation will comprise a smaller pool to fill senior management and skilled positions from when the boomers retire.[37]
- In 1999, nearly one of five adult workers (2.5 million workers) in California lacked a high school degree. Of these 28 percent were 19-29 years old and an additional 31 percent were 30-39 years old. About 73 percent of these less educated workers were Latino. Males constituted 63 percent of this group. Of the entire group, most were concentrated in Los Angles. The vast majority, 61 percent were married. As of 1999, 87 percent were employed in a low wage job such as food service or were laborers and 59 percent worked for small businesses, with the vast majority working full time. Very few (24 percent) have a pension and lack health insurance (50 percent).[38]
- Workers in the bottom 20 percent, measured by earnings, have experienced real wage declines during the recent boom years, as those in the top 20 percent have experienced real gains. The income gap is growing in California.
- Seventy-five percent of employers have immediate and continuing worker training needs and view community colleges as their most logical education and training provider. For example, 80 percent of manufacturers continue to experience a moderate to serious shortage of qualified job candidates.[39]

Particularly during tough economic times, small firms cannot afford to train their workforce even though they make a substantial contribution to new job generation. This applies to gazelles too, who often cannot pay for the necessary business consultation, production layout and other key services. All small firms have problems updating their business practices, obtaining new technology, improving manufacturing processes, or engaging in international trade.

The Community Colleges Economic Development Program is designed to help small firms, through training and other services that create and retain jobs and provide opportunities for upward mobility.

The California Community Colleges Economic Development Program addresses these competitive challenges by a customer driven, agile and continuous improvement driven strategy that, on the one hand, address workforce training needs and on the other, small business development, technology transfer and international trade requirements. This suggests a "contradictory college" or one that is capable of managing tradition as to fulfill academic requirements, while simultaneously creating revolutionary change and learning credentialing (technical capacities in information technology for example) settings. The result is an academically sound and relevantly credentialed graduate.[40] These new tactics are driven by an era of continuous change, by student demands, by the development corporate based training systems and by highly entrepreneurial net-based college training programs such as those offered by the University of Phoenix (serves 70,000 students in 32 states).[41]

[36] California Council on Science and Technology, Critical Path Analysis of California's Science and Technology Education System, February 4, 2002.
[37] Judi McClellan and Richard Holden, "The New Workforce: Age and Ethnic Changes", Labor Market Information Division.
[38] Elias Lopez, "Less-Educated Workers in California: A Statistical Abstract," California Research Bureau, August 2000.
[39] National Association of Manufacturers, "The Skill Gap 2001," 2001.
[40] Anthony Carnevale and Donna Desrochers, "Help Wanted...Credential Required: Community Colleges in the Knowledge Economy," American Association of Community Colleges, 2001.
[41] Richard Alfred and Patricia Carter, "Contradictory Colleges; Thriving in an Era of Continuous Change," New Expeditions, Issues paper No. 6.

A. THE FUTURE: THE GOVERNOR'S WORKFORCE DEVELOPMENT INITIATIVE

The Economic Development Program has the agility to address future challenges and is well aligned with new workforce initiative that will impact the community college system. Strategic Priority Initiatives and their Regional Centers are the vehicles that implement the mission and core objectives for the Program,[42] which are in line with the Governor's 2002 budget proposal, "Improving California's Workforce Development System" proposal.[43] The Governor calls for shifting the focus of California's existing workforce development system from short-term job training to economic development. The Economic Development Program was a forerunner of that concept and the Initiatives and the related Centers are the delivery system that has implemented it.

The Program's Initiatives and Regional Centers were designed to meet this focus, providing a stable, long-term infrastructure to respond to the long-term workforce development needs of workers and employers throughout the State. The Governor points out that there are a myriad of short-term programs that do not provide a system wide approach. The Regional Centers are the long-term infrastructure of the workforce and economic development system of the community colleges.

The goals of the Program's mission statement fall directly in line with the Governor's objectives and are already reflected in the mission statement in the Education Code that the Program's Regional Centers follow. The table below shows a comparison of the elements of the Governor's Workforce Initiative and the mission statement of the Community Colleges Economic Development Program.

Key Elements of the Governor's Workforce Development Initiative	Economic Development Program Mission Statement
The system should be comprised of programs that provide opportunities to acquire basic skills and enter and move up the workforce	Education Code Section 88500 (a). To advance California's economic growth and global competitiveness through quality education and services focusing on continuous workforce improvement, technology deployment and business development, consistent with the current needs of the state's regional economies. (b) To maximize the resources of the California Community Colleges to fulfill its role as the primary provider in fulfilling the vocational education and training needs of California business and industry. (g) To optimize access to community colleges' economic development services.
Career opportunities should reflect the needs of large regional markets rather than the needs of a single small community.	88500(e) To identify, acquire and leverage community college and other vocational training resources when possible, to support local, regional and statewide economic development.
Job training programs should be responsive to labor market and industry demands and growth opportunities, rather than provided in isolation of these considerations.	88500 (d) In consultation with the Economic Strategy Panel of the Trade and Commerce Agency, local economic development agencies, the private sector, labor and community groups, to develop innovative solutions, as needed, in identified strategic priority areas, including but not limited to, advanced transportation technologies, biotechnologies, small business, applied competitive technologies, including computer integrated manufacturing, production and continuous quality improvement, business and workforce performance, environmental technologies, health care delivery, information technology, multimedia/ entertainment, international trade, e-commerce and e-trade and workplace literacy.
Primary consideration for the expenditure of job training funds should be based on the coordinated use of resources and given to working partnerships among employers, CCC or other training organizations, local workforce investment boards, social services agencies and other community organizations and government.	88500 (c) To collaborate with other state and local agencies, including partners under the federal Workforce Investment Act of 1998 (Public Law 105-220) and the Trade and Commerce Agency, to deliver services that meet statewide and regional workforce, business development, technology transfer and trade needs that attract, retain and expand businesses.

[42] *Community Colleges Economic Development Program mission in Education Code Section 88500.*

[43] *January 10, 2002 Budget, http://www.dof.ca.gov/HTML/Budget02-03/00_toc.htm, "Improving California's Workforce Development System."*

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VII THE FUTURE

C. THE FUTURE: A BOARD OF GOVERNOR'S INITIATIVE FOR DEVELOPING CALIFORNIA'S NEW WORKFORCE

The Board of Governors for the California Community Colleges developed an initiative for developing California's new workforce. The Economic Development Program will also be a catalyst for this new effort. The Board's Initiative is described in the policy document, "Ladders of Opportunity" that requires the development of "career ladders" approaches to enable workers to continuously develop skills to upgrade and improve their economic status."[1] This sets a policy in motion to create a system where partnerships with workforce development agencies, employers, community colleges and community organization help create a system where workers would be able to grow and develop in a career field through training and lifelong learning. This policy change is reflected the Economic Development Program's current Request for Applications (RFA) in the objectives and eligible activities. The Program's RFA specifications for 2002-2003 now have an added eligible activity for "Career Ladders. The language includes:

Projects may also address the following:

- Based on a career ladders framework offering integrated academic and vocational education and opportunities for continuing and lifelong learning;
- Linked to economic needs and high wage, high demand career sectors;
- Accessible to a broad spectrum of individuals including students, incumbent workers and those now outside the workforce system;
- Developed in collaboration with employers;

Although a system-wide approach does not currently exist, the Economic Development Program provides many examples of funded projects that support career ladders' objectives. Below are examples from Regional Centers followed by sample career ladders diagrams for biotechnologies and advanced transportation.

Centers for Applied Competitive Technologies (CACT) – Manufacturing

Working with NIMS, the National Institute for Metalworking Sciences, the Centers for Applied Competitive Technologies (CACT) have supported a partnership between industry and several colleges and high schools that will begin to institute these standards in the curricula. In partnership with college faculty and industry, CACTs have developed programs suited to career ladders for Automation Maintenance, Laser Technicians, Industrial Automation and Computer Controlled Machinists. CACTs have assisted faculty in establishing articulation agreements between community colleges and four-year universities and colleges and high schools and community colleges in a majority of courses that the CACTs have helped to create in emerging technologies.

Environmental Technology

The Gender Equity grant program and the Department of Defense Base Closure grants resulted in more than 2000 trained hazardous waste clean-up specialists. These students were trained for 40-hour certification and entered the workforce. Many of these students entered environmental technology programs at nearby colleges and received AS degrees in environmental technology. Students with associate science (AS) degrees in environmental technology entered 4-year institutions that had articulated environmental technology programs with the community colleges. This includes California State Universities in San Jose, Long Beach, Bakersfield and Sonoma.

[1] *Board of Governors, "Ladders of Opportunity A Board of Governor's Initiative for Developing California's New Workforce," July 26, 2001*

In addition to offering Environmental Technology certifications and Associate in Science degrees, several community college Environmental Technology programs also articulate with local Regional Occupational Programs (ROPs), High School Environmental Career Academies, California State University and the University of California.

Advance Transportation

The Cypress College ATT Center outreaches to high schools, colleges, automotive dealers and regional occupational centers. The students are counseled and enter a career path appropriate to their skill level. An educational path is developed for each student including job placement. In cases of incumbent workers they are promoted within their work place based on their level of achievement. As students graduate from the ATT Center, automotive employers give them opportunities to work full time and advance on the salary scale. Graduates return for recurrent training in advanced transportation technologies to gain intellectual capital and value as an employee. The employer receives a productive, responsible and well-rounded team member who has the capacity to contribute towards the economic growth of the region, state and the advanced transportation technology industry. (See Chart 2 for a career ladders example for this Initiative).

Applied Biological Technologies Initiative

This Initiative has proven that it can help prepare students for career path opportunities into an emerging field. Two recent examples are described below, and a chart mapping career paths in biotechnologies follows (Chart 1).

A former community college student is now employed by a well-known biopharmaceutical company as a manufacturing operator in production after earning his certificate in biotechnology in 1997 at a community college. He heard about the program from a faculty member, took an intense summer program while working as a woodcutter and completed the additional courses in evening classes. He now prepares reagents and solutions and assists in the production for one of this company's most important products. The company is now paying for his education towards a bachelor's degree, for they saw his potential and he saw the value of additional education as he brushed shoulders at work with those who held bachelor, master and doctoral degrees.

Another former community college student reentered the workforce when she saw the value in gaining a biotechnology certificate at a community college for her entry back into a well-paying, biology-related job. She had received a bachelor's degree in biology in 1976 and after her children were grown and left home she took evening classes four nights a week while working a full-time job unrelated to biology. After earning the certificate, she worked in a temporary position at a pharmaceutical company as a technician in special studies, preparing media and maintaining cultures of 25 different organisms for validation of microbiological identification equipment. She leveraged this experience to gain a yet-higher paying job in another biotechnology company.

VII THE FUTURE

CHART 1

Career Journey Map
Applied Biological Technology Initiative

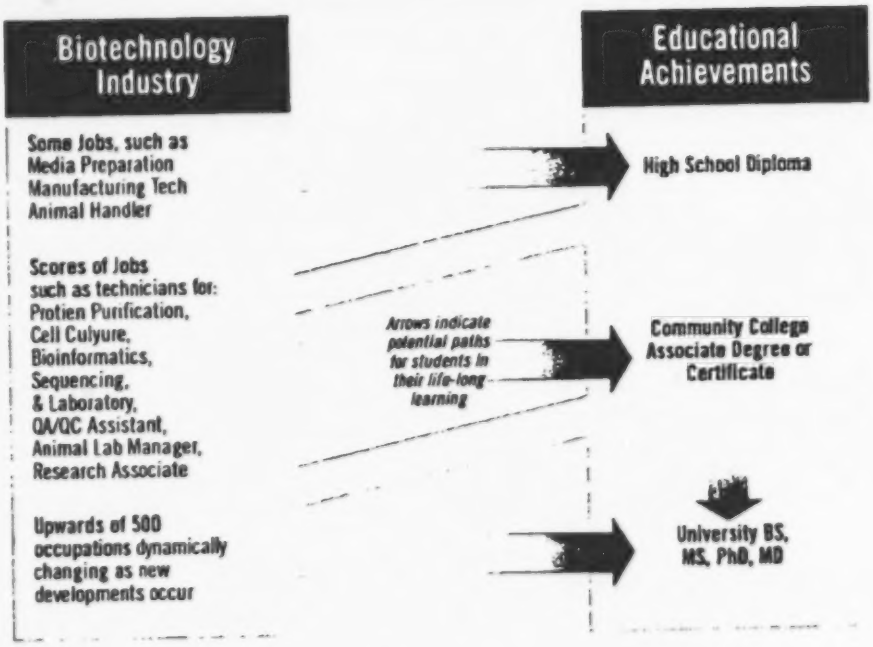
Biotechnology Industry
Educational Achievements
Some Jobs, such as Media Preparation Manufacturing Tech Animal Handler
Scores of Jobs such as technicians for: Protien Purification, Cell Culyure, Bioinformatics, Sequencing, & Laboratory, QA/QC Assistant, Animal Lab Manager, Research Associate
Upwards of 500 occupations dynamically changing as new developments occur
Arrows indicate potential paths for students in their life-long learning
High School Diploma
Community College Associate Degree or Certificate
University BS, MS, PhD, MD

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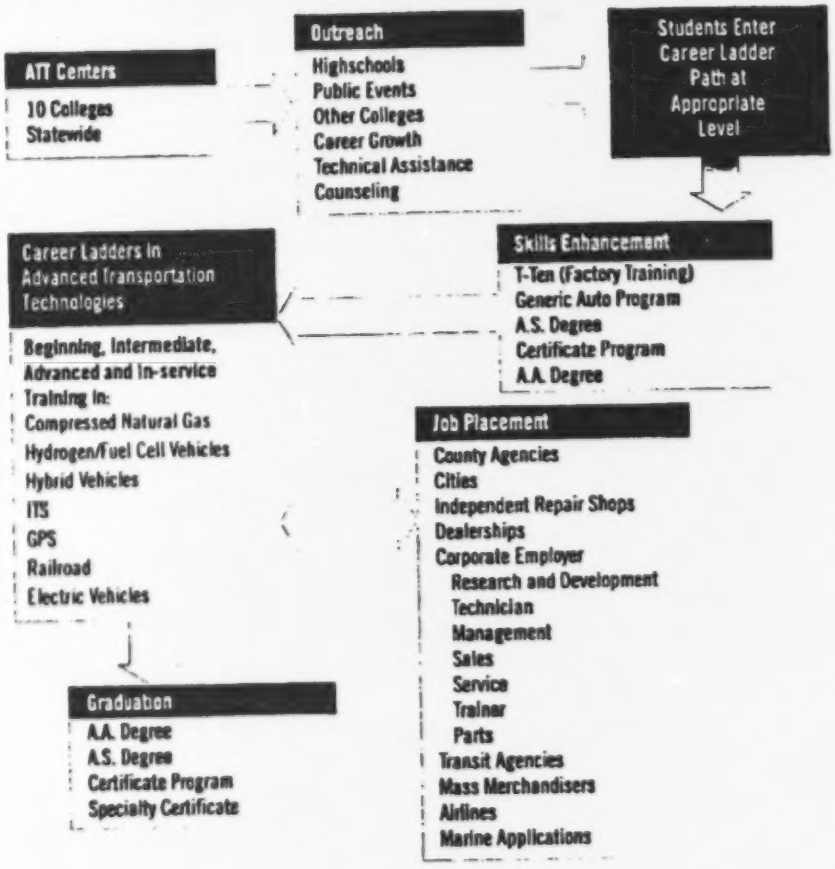
CHART 2

Career Journey Map
Advanced Transportation Technologies



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2. 1999 Economic Impact Evaluation
3. 2000 Economic Impact Evaluation, draft 2001 Evaluation
4. Methodology Document for Economic Impact Evaluation
5. 1999 Manual for Projects' Electronic Reporting – includes forms and instructions
6. Project Data Summary Form
7. Legislation: previous government code since 1992
8. CA Small Business Development Center Report
9. Operational Reviews for, Regional Environmental Business Resource Centers, Advanced Transportation Technologies, Centers for International Trade, Small Business Development Centers and Workplace Learning Resource Centers
10. Strategic Partner Lists for 2000-01
11. 2000-2001 Requests for Applications, and Instructions, Terms and Conditions
12. Program Advisory Committee Agendas, 2000-01
13. 2000-2001 Expenditure Plan
14. Annual reports are available from the late 1980s to Present

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